

Principal Scientist I/II, Viral Vector Engineering

Job ID

REQ-10051167

Jun 30, 2025

USA

Summary

Position is onsite in San Diego, CA

Internal Title: Principal Scientist I/II

This is a dual posting. The final level & title of the offer role would be determined by the hiring team based on the skills, experience & capabilities required to perform the role at the level the role has been offered

The Biologics Research Center (BRC) is accommodated within the Biomedical Research (BR). BRC, in collaboration with the disease areas (DA) and technical expert groups, builds the future biologics therapy pipeline of Novartis through the discovery and creation of new antibody, protein, nucleic acid and virus-based molecules.

We are currently recruiting a highly motivated Principal Scientist I/II with strong expertise in AAV-based gene therapy, molecular biology, and drug discovery. The ideal candidate will have experience with AAV biology, and a track record of advancing drug discovery programs through preclinical development in a biotech or pharmaceutical industry setting. This individual will be responsible for evolving novel capsid variants for effective transduction of desired tissues/cell types and will collaborate with other functions within a highly matrixed organization with the goal of delivering our genetic medicines pipeline.

About the Role

Key Responsibilities:

- Conceive, design and execute in vitro and in vivo directed evolution campaigns for developing engineered tissue-tropic AAV capsid variants
- Perform bioanalysis for in vitro and in vivo studies to validate lead candidate capsids
- Establish in vitro model systems, including stable cell lines, iPSC-derived cells, and primary cells, and develop assays needed to identify mechanisms of action of evolved capsid variants
- Manage research associates to execute experiments in alignment with project timelines. Review data and document experiments in SOPs, study reports, and ELN entries.
- Collaborate with cross-functional teams, including researchers, bioinformaticians, translational scientists, and regulatory affairs colleagues to design and execute studies.
- Stay up-to-date with the latest advancements in the AAV gene therapy field.

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Essential Requirements:

- PhD degree with 4+ years industry experience in molecular biology, genomics, neuroscience, or related

fields.

- Experience with high-throughput, Next Generation Sequencing (NGS)-based screens and library preparation workflows.
- Proficiency in molecular biology techniques, including cloning and DNA/RNA/protein quantification methods (such as qPCR, ddPCR, western blotting, ELISA).
- Proficiency with mammalian cell culture.
- Strong organization, communication, and project management skills. Comfortable working in a fast-paced, collaborative environment. Able to efficiently coordinate among project teams, particularly with respect to resource needs and timelines.
- Able to work independently, troubleshoot technical issues, and contribute subject matter expertise to project teams. Able to present results and propose strategies to senior management and external partners.

Desirable Requirements:

- Experience with iPSC-derived and primary cells, immunofluorescent staining and imaging, and/or FACS is preferred.
- Track record of leading discovery stage programs through preclinical development in an industry setting. Experience with AAV-based gene therapy is preferred.
- Experience managing direct reports is preferred.

Novartis Compensation and Benefit Summary: *The salary for this position is expected to be:*

- Principal Scientist I \$103,600 and \$192,400 per year
- Principal Scientist II \$114,100 and \$211,900 per year

The final salary offered is determined based on factors like, but not limited to, relevant skills and experience, and upon joining Novartis will be reviewed periodically. Novartis may change the published salary range based on company and market factors.

Your compensation will include a performance-based cash incentive and, depending on the level of the role, eligibility to be considered for annual equity awards.

US-based eligible employees will receive a comprehensive benefits package that includes health, life and disability benefits, a 401(k) with company contribution and match, and a variety of other benefits. In addition, employees are eligible for a generous time off package including vacation, personal days, holidays and other leaves.

Why Novartis: Helping people with disease and their families takes more than innovative science. It takes a community of smart, passionate people like you. Collaborating, supporting and inspiring each other. Combining to achieve breakthroughs that change patients' lives. Ready to create a brighter future together? <https://www.novartis.com/about/strategy/people-and-culture>

Join our Novartis Network: Not the right Novartis role for you? Sign up to our talent community to stay connected and learn about suitable career opportunities as soon as they come up: <https://talentnetwork.novartis.com/network>

Benefits and Rewards: Read our handbook to learn about all the ways we'll help you thrive personally and professionally: <https://www.novartis.com/careers/benefits-rewards>

EEO Statement:

The Novartis Group of Companies are Equal Opportunity Employers. We do not discriminate in recruitment, hiring, training, promotion or other employment practices for reasons of race, color, religion, sex, national origin, age, sexual orientation, gender identity or expression, marital or veteran status, disability, or any other legally protected status.

Accessibility & Reasonable Accommodations

The Novartis Group of Companies are committed to working with and providing reasonable accommodation to individuals with disabilities. If, because of a medical condition or disability, you need a reasonable accommodation for any part of the application process, or to perform the essential functions of a position, please send an e-mail to us.reasonableaccommodations@novartis.com or call +1(877)395-2339 and let us know the nature of your request and your contact information. Please include the job requisition number in your message.

Division

Biomedical Research

Business Unit

Pharma Research

Location

USA

State

California

Site

San Diego

Company / Legal Entity

U175 (FCRS = US175) Novartis Institutes for BioMedical Research, Inc.

Functional Area

Research & Development

Job Type

Full time

Employment Type

Regular

Shift Work

No

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