

Expert II Data Science/Senior Expert Data Science, Capsid Engineering

Job ID
REQ-10064775

10月 21, 2025

USA

摘要

#LI-onsite

Location: San Diego, CA

Internal Job Title: Expert II Data Science or Senior Expert I, Data Science

****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.**

We are seeking a highly motivated, independent Expert II Data Science or Senior Expert I in Computational Biology to expand our AAV capsid engineering platform. This role will drive innovation in AAV capsid engineering and vector characterization, used in the development of next-generation gene therapies for neuromuscular and neurogenetic diseases. This position will collaborate across disciplines and representing the group internally and externally. The position requires an in-depth understanding of computational biology coupled with machine-learning methods, next generation sequencing, AAV biology and modern structural and sequence-based approaches to protein engineering. This role will be closely associated with laboratory-based biologists, and wet-lab

experience and knowledge of sequencing library protocols.

About the Role

Key Responsibilities

- Contribute to the scientific strategy for AAV capsid engineering, integrating computational and experimental approaches.
- Analyzing data from directed evolution campaigns and designing AAV capsid libraries using statistical and machine learning models.
- Custom software development for analysis and machine learning-based engineering of screened capsid sequences and *in-silico* design of novel capsid variants.
- Development of new experimental methods for preparing Illumina and long read sequencing libraries in the lab.
- Preparing summaries of data and present internally to colleagues and management.
- Drafting SOPs, following protocols, diligently documenting experimental data in electronic lab notebooks, and authorizing scientific reports for internal documentation or regulatory submissions.
- Represent the team in internal and external scientific forums, driving the development of novel methods and technologies.
- Maintaining up-to-date knowledge of emerging technologies and scientific approaches in the field of gene therapy.
- Mentor colleagues and actively supporting a culture of innovation, learning, respect, and trust

Essential Requirements:

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 (Expert II Data Science or Senior Expert I, Data Science):

For Expert II Data Science:

- Ph.D. Bioinformatics, Computational Biology, Computer Science (recent Ph.D. welcome to apply) OR MS degree in bioinformatics, computational biology, computer science, structural biology or a related field with 4 years of relevant industry research experience
- Proficiency in Python and/or R programming languages.
- Prior experience in analyzing Illumina next-generation sequencing data from run QC, read preprocessing, analysis pipeline, and generation of final reports with interpretation and plots.
- Experience with workflow management software such as Snakemake or Nextflow.
- Experience with Amazon Web Services usage for cloud computing workflows and associated programming APIs.
- Machine learning and statistical model experience with biological sequences.
- Independent and critical thinker, multi-tasker, and problem solver with strong verbal and written communication skills, and a team-first mindset.

For Senior Expert I, Data Science

- PhD in Bioinformatics, Computational Biology, Computer Science, or a related field, with a minimum of years of relevant industry experience.
- Demonstrated scientific leadership and a record of high-impact publications, patents, and external presentations.
- Advanced proficiency in Python and/or R, with professional software engineering experience (version control, testing, code reviews).
- Extensive experience in analyzing Illumina and long-read sequencing data, including QC, preprocessing, and pipeline development.
- Proven ability to design and implement machine learning and statistical models for biological sequence analysis.
- Knowhow in utilizing protein structure analysis to developing protein design strategies.
- Prior wet-lab experience in molecular biology and sequencing library preparation.
- Experience with workflow management tools (e.g., Snakemake, Nextflow), cloud computing (AWS) and HPC.
- Strong independent and critical thinking, problem-solving skills, and a collaborative, team-first mindset.
- Excellent verbal and written communication skills, with the ability to engage effectively across scientific and technical disciplines.

Desirable Requirements:

- Professional software engineering experience with version control, testing, and code reviews is strongly preferred.
- Familiarity with long read sequencing is a plus.

The salary for this position is expected to range between:

- Expert II Data Science the pay range for this position at commencement of employment is expected to be between: \$103,600 and \$192,400/ per year
- Senior Expert I Data Science pay range for this position at commencement of employment is expected to be between: \$119,700 and \$222,300/ 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.

To learn more about the culture, rewards and benefits we offer our people click [here](#).

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.

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Biomedical Research

Business Unit
Universal Hierarchy Node

地点
USA

状态
California

站点
San Diego (California)

Company / Legal Entity
U175 (FCRS = US175) Novartis Institutes for BioMedical Research, Inc.

Functional Area
Data and Digital

Job Type
Full time

Employment Type
Regular

Shift Work
No

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