

Sr. Principal Scientist to Associate Director, Translational Modeling & Simulation

Job ID
REQ-10039301
Feb 06, 2025
USA

Summary

#LI-Hybrid

About the role:

Novartis is a leader in the cardiovascular/renal and neuroscience disease areas with a robust pipeline of projects. We are seeking a translational modeler eager to accelerate projects with emerging and traditional modalities, including siRNA therapeutics ("xRNA"), antibodies and antibody conjugates, and small molecules. You will work in a multi-disciplinary environment with early discovery teams to inform lead optimization strategy and preclinical teams to drive compounds from candidate selection to first-in-human. As part of a truly translational modeling team, you will also collaborate with clinical pharmacology and pharmacometrics groups to leverage quantitative systems pharmacology (QSP) approaches to inform clinical decisions spanning early dose optimization to life-cycle management.

This role reports to a PK Sciences Translational M&S team lead, in a group situated within Biomedical Research, the research engine of Novartis.

About the Role

Key Responsibilities:

- Act as the Translational M&S representative on several programs. Develop and execute modeling strategies, contribute to project team discussions, and guide decisions from therapeutic design to first-in-human dose selection and beyond.
- Build and apply PK/PD, QSP, and physiologically-based PK (PBPK) models that link drug pharmacology, tissue biodistribution, mechanism(s) of action, and biological outcomes.
- Collaboratively develop platform models and modeling workflows that extend across multiple projects and phases of discovery & development.
- Proactively seek opportunities to increase the impact and awareness of translational modeling through communications with internal and external audiences.
- Engage in strategic initiatives within M&S, such as coordinating modeling activities for a disease area or therapeutic modality or leading the development of a new platform. Contribute as a scientific area expert across PK Sciences and Biomedical Research.

Essential requirements:

- Education: Ph.D. in biology, bioengineering, pharmaceutical sciences, biophysics, or a related field. Master's degree with 8+ years of industry experience and demonstrated impact (e.g., publications) will be considered.
- General Modeling Skills: Expert level proficiency in core modeling fundamentals is required, including scripting languages (e.g., MATLAB, R), construction of ordinary differential equation (ODE) models, parameter estimation, data visualization, and foundational data science concepts.
- Industry Modeling Skills: Proficiency in pharmacokinetics and pharmacodynamics (PK/PD), quantitative systems pharmacology (QSP), and/or physiologically based PK (PBPK) is required.
- Domain Expertise: Prior experience with the integration of computational modeling and biological concepts is required.
- Collaboration and Communication: Demonstrated ability to communicate modeling results to a multidisciplinary audience for collaborative work and/or to facilitate strategy and decision-making. Fluent in English (oral and written).
- Candidates with demonstrated impact as a modeler, preferably in the pharmaceutical/biotech industry, and with commensurate experience and proficiency may be considered for the Senior Principal Scientist (5+ years experience) or Associate Director (7+ years experience) role.

Desirable Requirements:

- Experience modeling in cardiovascular, renal, and/or neuroscience disease areas is preferred
- Experience with RNA therapeutics (siRNA, ASO), antibodies, antibody-drug conjugates (ADCs), and/or low molecular weight compounds is strongly preferred.

This is a dual level posting. The final level and 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.

#ModelingAndSimulation #PKSciences

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Novartis Compensation and Benefit Summary: The pay range for this position at commencement of employment is expected to be between \$152,600 to \$283,400/year; however, while salary ranges are effective from 1/1/25 through 12/31/25, fluctuations in the job market may necessitate adjustments to pay ranges during this period. Further, final pay determinations will depend on various factors, including, but not limited to geographical location, experience level, knowledge, skills, and abilities. The total compensation package for this position may also include other elements, including a sign-on bonus, restricted stock units, and discretionary awards in addition to a full range of medical, financial, and/or other benefits (including 401(k) eligibility and various paid time off benefits, such as vacation, sick time, and parental leave), dependent on the position offered. Details of participation in these benefit plans will be provided if an employee receives an offer

of employment. If hired, employee will be in an “at-will position” and the Company reserves the right to modify base salary (as well as any other discretionary payment or compensation program) at any time, including for reasons related to individual performance, Company or individual department/team performance, and market factors.

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>

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Division

Biomedical Research

Business Unit

Pharma Research

Standort

USA

State

Massachusetts

Site

Cambridge (USA)

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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