

Director, Modeling & Simulation

Job ID

REQ-10080247

Jun 12, 2026

LOC_US

About the Role

Key responsibilities:

- Lead and develop a high-performing team focused on disease modelling, including recruitment, coaching, performance management, and talent development.
- Define and execute disease modelling strategies aligned with portfolio priorities, ensuring models address key decision questions across discovery and development.
- Develop and apply mechanistic disease models (e.g., QSP, systems biology, integrative PK/PD-disease frameworks) to understand disease progression, variability, and response to intervention.
- Drive portfolio-level impact, including modelling to support target selection, indication prioritisation, competitive differentiation, and probability of technical success.
- Collaborate with PKS and TM leadership to shape scientific priorities and ensure alignment with broader M&S and organisational strategy.
- Establish and evolve modelling platforms, workflows, and best practices that can be leveraged across disease areas and programs.
- Integrate diverse data sources (preclinical, clinical, omics, and external data) to enable robust, predictive disease models.
- Lead or contribute to cross-functional initiatives that advance modelling capabilities, including adoption of innovative approaches (e.g., AI-enabled methods, digital twins where relevant).
- Drive scientific excellence and continuous improvement, ensuring use of state-of-the-art methodologies and strengthening disease modelling capabilities across the organisation.
- Influence internal and external stakeholders, including contributions to scientific publications, consortia, and collaborations that enhance Novartis leadership in disease modelling.

Essential requirements

- Ph.D. in biology, bioengineering, pharmaceutical sciences, biophysics, or a related field.
- 10+ years of relevant postdoctoral, academic, industry, or government experience with a track record as a leader and individual contributor in one or more of the following fields: Disease Modeling, Pathway Modeling, Quantitative Pharmacology, Systems Pharmacology, Mechanistic Modeling.
- Demonstrated leadership experience, including building and developing teams and delivering through both direct reports and matrix environments.
- Proven experience applying mechanistic or systems-level disease models to inform portfolio or program decisions.
- Strong understanding of drug discovery and development, and how modelling informs key transitions from discovery to clinical development.
- Experience influencing strategy through contributions to governance discussions, cross-functional teams, or scientific leadership initiatives.
- Ability to translate complex modelling outputs into clear, actionable insights for decision-makers.
- Track record of driving scientific innovation, including development or application of new methodologies, platforms, or modelling approaches.
- Strong collaboration and stakeholder engagement skills across scientific and clinical disciplines.
- Excellent communication skills, with the ability to engage both technical and non-technical audiences.
- Established credibility in the M&S or quantitative pharmacology community (e.g., publications, collaborations, or scientific leadership).

- Fluency in English (oral and written).

This is a hybrid role that requires a balance of in-person and virtual working, with an average of 12 days a month on site in Cambridge, MA.

The salary for this position is expected to range between:

Director: \$176,400 and \$327,600 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](#).

Role Requirements

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>

Benefits and Rewards: Learn about all the ways we'll help you thrive personally and professionally.

[Read our handbook \(PDF 30 MB\)](#)

Division

DIV_RE

Business Unit

Research

Location

LOC_US

Site

Cambridge (USA)

Company / Legal Entity

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

Functional Area

FCT_RD

Job Type

Full time

Employment Type

Regular

Shift Work

No

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