

Director, Modeling & Simulation

Job ID
REQ-10080247

6月 12, 2026

USA

摘要

#LI-Hybrid
Internal Title: Director
Location: Cambridge, MA

Novartis is a leader in mechanistic modelling and simulation. We are seeking an experienced modelling and simulation leader to build and lead a small, high-impact team focused on multiscale disease modelling to support portfolio decision making across the Novartis pipeline.

In this role, you will partner with PKS M&S, Therapeutic Areas, and multidisciplinary teams to develop and apply quantitative disease models that inform portfolio strategy, prioritisation, and key development decisions. You will contribute to departmental strategy, drive innovation in disease modelling approaches, and ensure the proactive use of modelling insights to shape programs from discovery through clinical development.

This role reports to the Global Head of Modeling & Simulation (M&S) within Translational Medicine in Biomedical Research.

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](#).

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 \(PDF 30 MB\)](#)

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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.

部门

Biomedical Research

Business Unit

Research

地点

USA

状态

Massachusetts

站点

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

```
var config = { targetId: "kalturaplayer6a2db6a9a9331122089806", provider: { widgetId:
"10m7rm1pm", partnerId: "2076321", uiConfId: "55802022" }, playback: { autoplay: false, autopause:
false, allowMutedAutoPlay: false, loop: false }, sources: { options: {}, startTime: 0 }, plugins: {},
sources: { options: {}, startTime: 0 }, ui: { showCCButton: false, settings: { showQualityMenu: true,
showSpeedMenu: false }, css : "/modules/custom/arcticnckalturaaddon/css/kalturavideo.css",
components: { fullscreen: { disableDoubleClick: false } }, uiComponents: [ { presets: ['Playback',
'Live'], area: 'BottomBarRightControls', replaceComponent: 'Fullscreen', get:
KalturaPlayer.ui.components.Remove } ] } }; // Check and add plugins only if they exist if
(KalturaPlayer.plugins["download"]) { config.plugins.download = { disable: true }; } if
(KalturaPlayer.plugins["transcript"]) { config.plugins["playkit-js-transcript"] = { position: "right", //
Default: bottom;('left', 'right', 'top', 'bottom') to enable transcript. expandMode: "over", // Default:
alongside;('alongside', 'hidden', 'over') expandOnFirstPlay: false, showTime: true, downloadDisabled:
false, printDisabled: false, disable: true }; } if (KalturaPlayer.plugins["preventSeek"]) {
config.plugins.preventSeek = { preventSeekForward: false, preventSeek: false }; }
config.plugins.floating = { disable: true }; if (KalturaPlayer.plugins["navigation"]) {
config.plugins.navigation = { position: "right", expandMode: "over", expandOnFirstPlay: false, visible:
false }; } if (KalturaPlayer.plugins["hotspots"]) { config.plugins['playkit-js-hotspots'] = { disable: true }; }
if (KalturaPlayer.plugins["moderation"]) { config.plugins['playkit-js-moderation'] = { disable: true }; } if
(KalturaPlayer.plugins["info"]) { config.plugins['playkit-js-info'] = { disable: true }; } if
(KalturaPlayer.plugins["share"]) { config.plugins.share = { disable: true }; } config.ui.uiComponents =
[]; if (KalturaPlayer.plugins["googleAnalytics"]) { config.plugins.googleTagManager = {};
config.plugins.googleTagManager.customEventsTracking = {};
config.plugins.googleTagManager.containerId = 'GTM-57RJQ5';
config.plugins.googleTagManager.customEventsTracking.custom = [];
config.plugins.googleTagManager.customEventsTracking = { preset: { coreEvents: true, UIEvents:
false, playlistEvents: false, castEvents: false } }; }
```

```
try { var kalturaPlayer = KalturaPlayer.setup(config); // Add the player to the global array. if (typeof
kalturaPlayerVideos !== 'undefined') { kalturaPlayerVideos.push(kalturaPlayer); } else { var
kalturaPlayerVideos = []; kalturaPlayerVideos.push(kalturaPlayer); } // Load the Player for other
media. kalturaPlayer.loadMedia({entryId: "1_dgfvmafo"}); } catch (e) { console.error(e.message) }
```

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