

# AI-enabled Scientific Computing Expert - Drug Product Development

Job ID  
REQ-10076561

4月 27, 2026

India

## 摘要

We are looking for an AI-enabled Scientific Computing Expert to strengthen Drug Product development capabilities within a global CMC organization. In this role, you will focus on how AI, data science, and modeling can improve decision-making in CMC, from early formulation development to commercial manufacturing.

You will work in a highly interdisciplinary environment, collaborating with formulation scientists, process engineers, data scientists, and manufacturing experts to advance model-informed decision-making and embed AI-native workflows into day-to-day development activities.

Rather than applying models in isolation, you will design AI-native workflows where mechanistic understanding, data-driven models, and human expertise work together.

About the Role

## Major Accountabilities:

- You will combine process and product understanding with AI and advanced analytics to deliver decision support across the drug product lifecycle.
- The focus is on practical impact through AI-supported product development—modeling, experimentation, and knowledge management. · Apply mechanistic, empirical, statistical, and hybrid (physics + machine learning) modeling approaches to support drug product formulation and process development from early lab phase through scale-up and commercialization. · Translate formulation and process questions into model- and data-ready problem statements; define success criteria, assumptions, and uncertainty considerations with subject-matter experts. · Use AI and advanced analytics to guide experimentation (e.g., model-based Design of Experiments, Bayesian Optimization), accelerate learning cycles, and continuously refine models as new data becomes available. · Develop predictive models, digital twins, and decision-support tools for key drug product unit operations (e.g., oral solid dose manufacturing). · Build end-to-end data science solutions (data preparation, exploratory analysis, modeling, validation, deployment, and lifecycle management) with a focus on transparency and reproducibility. · Create clear visualizations, dashboards, and technical narratives to communicate insights and support decision making for diverse stakeholders. · Contribute to automation and AI-assisted/agent-based workflows for data preparation, modeling, analysis, and reporting - improving efficiency while maintaining scientific oversight. Contribute to knowledge sharing, documentation, internal standards, and reusable modeling/AI assets within the global modeling and digital community

## Minimum Requirements

- Master ' s degree or PhD in chemical engineering, pharmaceutical sciences, mechanical engineering, materials science, physics, applied mathematics, statistics, data science, or a related quantitative discipline.
- Experience or strong interest in pharmaceutical development and manufacturing processes or other complex process environments. Solid understanding of transport phenomena, process science, and/or statistical modeling principles.
- Hands-on experience with programming and data analysis (primarily Python; R is a plus). Experience applying statistics, DoE, multivariate analysis, and/or machine learning in scientific or industrial settings.
- Experience using or developing machine learning models (including model evaluation and validation).
- Familiarity with AI-assisted modeling, automation, and/or agent-based workflows. Understanding of model lifecycle management, reproducibility, and deployment considerations in regulated environments.
- Experience with visualization and storytelling (e.g., dashboards or clear technical reporting).

## Desirable Requirements:

- Experience with pharmaceutical process modeling tools (e.g., PBM, gPROMS, DEM tools) and/or digital twins. Strong communication skills to explain technical concepts to non-experts and influence decisions.
- Exposure to Qods principles, PAT concepts, or regulatory-relevant modeling activities. Experience working in global matrix organizations. Ability to work with experimental and industrial datasets, including data cleaning, exploratory analysis, and uncertainty-aware

interpretation including model credibility assessments according to regulatory guidelines & standard.

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 \(PDF 30 MB\)](#)

部门

Development

Business Unit

Development

地点

India

站点

Hyderabad (Office)

Company / Legal Entity

IN10 (FCRS = IN010) Novartis Healthcare Private Limited

Functional Area

Data and Digital

Job Type

Full time

Employment Type

Regular

Shift Work

No

```
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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
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(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:
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false }; } if (KalturaPlayer.plugins["hotspots"]) { config.plugins['playkit-js-hotspots'] = { disable: true }; }
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config.plugins.googleTagManager.customEventsTracking.custom = [];
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false, playlistEvents: false, castEvents: false } }; }
```

```
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media. kalturaPlayer.loadMedia({entryId: "1_dgfvmafo"}); } catch (e) { console.error(e.message) }
```

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