NOVARTIS

Associate Director – Scientific Data, Modeling & AI (m/f/d)

Job ID
REQ-10091680
Ноя. 04, 2026
Швейцария

Сводка

We are looking for an experienced scientific digital leader to strengthen how data, modeling and artificial intelligence are used in pharmaceutical development of synthetic molecules. Working at the interface of pharmaceutical science, data and technology, you will translate development challenges into scalable solutions, from structured laboratory data and reusable data products to scientific models, AI-enabled workflows and decision support.
This is a hands-on, Basel-based role. You will move between scientific discussions, laboratory processes, data and system landscapes, and practical solution design with measurable improvement in how scientists work, learn from experiments and make development decisions.

#LI-Hybrid
Location: Basel, Switzerland
This role is based in Basel, Switzerland. Novartis is unable to offer relocation support for this role. Please only apply if this location is accessible for you.

About the Role

Shape and deliver digital transformation

• Partner with scientific teams to identify where data, modeling, automation or AI can materially improve development processes.

• Translate scientific and business needs into pragmatic solutions and guide them from concept through production-ready implementation, adoption and sustainable ownership.

• Connect laboratory workflows, instruments, scientific applications and enterprise platforms, creating reusable data products, workflow components and digital services rather than isolated solutions.

Advance scientific modeling and decision making

• Translate formulation, materials science and process-development questions into quantitative, model-ready problems.

• Develop or enable statistical, mechanistic, machine-learning and hybrid approaches, using methods such as Design of Experiments, multivariate analysis, optimization and Bayesian methods where they add scientific value.

• Embed experimental data, models and domain knowledge in decision-support workflows, with clear treatment of assumptions, uncertainty, validation, applicability and lifecycle.

Build AI-enabled scientific workflows

• Identify high-value use cases for generative AI, scientific copilots and AI agents, and turn promising concepts into production-ready solutions.

• Build and deploy agent-based workflows that interact with scientific data, models, knowledge sources and enterprise platforms across data preparation, analysis, experiment planning, reporting and decision support.

• Establish reusable technical patterns that allow successful solutions to scale across PHAD and potentially broader TRD.

Strengthen scientific data foundations

• Make laboratory and development data accessible, structured, contextualized and reusable for analytics, modeling and AI.

• Contribute to scientific data products, including data models, metadata, reference data, quality rules and lineage, and connect laboratory and instrument data to platforms such as SPINE Explorer.

• Ensure interoperability, security, quality, governance and regulatory expectations are built into solution design.

Make solutions work in practice

• Build and deliver production-ready solutions hands-on, not just prototypes, using Python and modern data science, modeling and AI environments.

• Work with platform and software engineering teams to deploy, scale and maintain robust solutions and intuitive applications for scientists and decision makers.

• Document solutions, share learning and create reusable assets that accelerate adoption by others.

Education and experience

• Master’s degree or PhD in a quantitative scientific or engineering discipline, such as chemical engineering, pharmaceutical sciences, chemistry, physics, computer science, applied mathematics, statistics or data science.

• Several years of relevant experience applying data, modeling or digital technologies to scientific or engineering problems, ideally in pharmaceutical R&D, CMC, manufacturing or another complex scientific environment.

• Demonstrated ability to take an ambiguous technical or scientific problem through to a production-ready implemented solution, while working across disciplines and influencing in a matrix environment.

Scientific and technical capabilities

• Strong quantitative foundation and solid knowledge of at least one domain relevant to pharmaceutical development, such as chemistry, pharmacy or chemical/process engineering, to understand scientific problems, experimental data and development processes.

• Strong Python knowledge (essential), with practical experience developing, testing and deploying reproducible, production-ready data, modeling or AI solutions.

• Experience with statistical or machine-learning models, mechanistic modeling, optimization, simulation or scientific computing, and the ability to evaluate models critically.

• Practical understanding of data architectures, APIs, databases, data engineering and structured and unstructured scientific data.

Digital and AI capabilities

Relevant experience in one or more of the following is particularly valuable:

• Generative AI and large language models (e.g. LLM APIs, evaluation)

• AI agents, tool use (e.g. MCP) and orchestration (e.g. LangGraph)

• Retrieval-augmented generation and knowledge systems (e.g. vector databases, knowledge graphs)

• Scientific data products and data engineering (e.g. SQL, Spark, FAIR data)

• Machine learning and hybrid physics/data-driven models (e.g. scikit-learn, PyTorch)

• Bayesian optimization and active learning (e.g. BoTorch, PyMC)

• Scientific software development and deployment (e.g. Git, CI/CD, Docker, REST APIs)

• Laboratory and instrument data integration (OPC UA, MHS, Sila)

• Model and AI lifecycle management (e.g. MLOps, MLflow, monitoring)

• Regulated scientific environments (e.g. GxP, data integrity, computerized system validation)

Benefits & Rewards

At Novartis, we’re committed to reimagining medicine together - and rewarding the people who make it happen.

Expected Annual Base Salary Range for role: 129,500 - 240,500 CHF

The base salary offered is determined based on gender-neutral objectives, such as relevant skills, competencies and experience in accordance with the Novartis pay setting policy and upon joining Novartis will be reviewed periodically.

In addition to your base salary, you may be eligible for a performance-based bonus depending on certain performance parameters.

The rewards of being part of our team go far beyond base pay and incentives. We also offer a variety of competitive benefits in kind to help you thrive personally and professionally, such as insurance plans, retirement plans, wellbeing resources and global recognition programs. In addition, we provide flexible and hybrid working options, where possible, and minimum 14 weeks paid parental leave.

Read our brochure to learn more about our global total rewards offering:

https://www.novartis.com/sites/novartis_com/files/novartis-life-handbook.pdf

Note: Benefits and compensation may vary by country and are subject to local legal requirements, including provisions of collective bargaining agreements where applicable. A full overview of your compensation package, including any relevant collective bargaining agreement details applicable to your role based on your employment location and Novartis employer entity, will be communicated separately to you during the application process.

Accessibility and Accommodation
Novartis is committed to working with and providing reasonable accommodation to all individuals. If, because of a medical condition or disability, you need reasonable accommodation for any part of the recruitment process, or to receive more detailed information about the essential functions of a position, please send an e-mail to diversity.inclusion_ch@novartis.com and let us know the nature of your request and your contact information. Please include the job requisition number in your message.

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)

Primary location salary range
CHF129,500.00 - CHF240,500.00
Дивизион
Development
Business Unit
Development
Место
Швейцария
Сайт
Basel (City)
Company / Legal Entity
C028 (FCRS = CH028) Novartis Pharma AG
Functional Area
Data and Digital
Job Type
Full time
Employment Type
Regular
Shift Work
No

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