NOVARTIS

Senior Expert / Senior Principal PKS Data Scientist & Scientific Software Engineer (Dual level posting)

Job ID
REQ-10079732
Июн. 30, 2026
Швейцария
Available in: English

Сводка

The Senior Data Scientist & Scientific Software Engineer will join the Modeling & Simulation Data Science team within the Translational Medicine Unit to help advance data-driven drug discovery. The role is focused on transforming large-scale ADME, PK, and related experimental datasets into actionable insights through advanced analytics, machine learning, and robust software engineering. Partnering closely with pharmacokinetic sciences (PKS) scientists, Data & Digital teams, and cross-functional stakeholders, this position will drive the development of scalable analytical applications, reusable computational workflows, and decision-enabling in silico solutions that accelerate lead optimization and strengthen scientific decision making.

About the Role

200+ experimental datasets are generated every day in the Pharmacokinetic Sciences (PKS) department at Novartis Biomedical Research. This role sits at the center of efforts to unlock the value of these data for decision making and to shape the future of medicine through advanced data science.

As Associate Director Data Scientist & Scientific Software Engineer, you will join the Modeling & Simulation Data Science team in the Translational Medicine Unit and work at the intersection of data science, software engineering, and drug discovery. You will apply machine learning, statistics, and modern software development practices to harness ADME and PK data, uncover structure–property relationships, and translate scientific and business needs into scalable, strategically aligned solutions.

You will collaborate closely with Data & Digital and PKS wet- (ADME and bioanalytical) and dry-lab (modeling) teams to identify opportunities where data, applications, and in silico methods can meaningfully improve decision quality, efficiency, and scientific impact. In addition to hands-on technical delivery, you will help shape and champion fit-for-purpose solutions that are robust, reusable, and maintainable in a production setting.

This role is ideal for a scientifically grounded data leader who combines strong analytical depth with practical software engineering expertise, and who is motivated by delivering measurable impact in drug discovery through high-quality data products, machine learning, and computational innovation.

Key Responsibilities

- Act as a key Modeling & Simulation Data Science representative on discovery and lead optimization programs, contributing scientific and strategic input to project discussions and decisions.
- Partner with Data & Digital and PKS wet- and dry-lab teams to identify priority gaps, clarify business needs, and translate them into high-impact analytical and computational solutions.
- Design, build, and maintain scalable applications, workflows, and data pipelines that support scientific analysis and decision making across projects and modalities.
- Develop, evaluate, and deploy machine learning and statistical models to uncover relationships between chemical structure and molecular or pharmacokinetic properties.
- Apply data mining, visualization, and exploratory analysis to derive insight from complex experimental datasets and communicate findings clearly to diverse stakeholders.
- Create and implement project- or modality-specific in silico models and data strategies that accelerate and streamline compound progression decisions.
- Write production-quality code following strong software engineering practices, including version control, testing, documentation, and maintainability standards.
- Lead or contribute to cross-functional initiatives spanning data science, software engineering, and laboratory teams, ensuring delivery of fit-for-purpose solutions.
- Promote the adoption and effective use of in-house tools, applications, and data science methods to maximize impact across Translational Medicine and PKS.
- Stay current with advances in AI/ML, statistics, and computational methods relevant to ADME, PK/PD, and drug discovery, and help bring appropriate innovation into practice.

Essential Requirements

- Advanced degree in a relevant scientific or quantitative field such as cheminformatics, bioinformatics, biomedical engineering, computational biology, computational chemistry, data science, AI/ML in life sciences, or a related discipline.
- PhD with 5+ years or MSc with 8+ years of relevant work experience applying data science in drug discovery, translational research, or related scientific environments.
- Strong expertise in machine learning, statistics, and reproducible data science workflows, with demonstrated ability to apply them to real scientific problems.
- Proficiency in Python and/or R, with solid software development practices including version control, testing, documentation, and production-quality coding standards.
- Experience designing, developing, and deploying robust analytical applications, computational workflows, or machine learning systems in collaborative environments.
- Demonstrated ability to work across multidisciplinary teams and translate complex analytical concepts into clear, actionable insights for scientists and stakeholders.
- Strong communication, collaboration, and leadership capabilities, with the ability to influence decisions in cross-functional settings.
- Good understanding of drug discovery processes, with particular relevance to ADME, pharmacokinetics, pharmacodynamics, or related translational data domains.

Desirable Requirements

- Experience with discovery-stage PK modeling, ADME data interpretation, or relating preclinical properties to in vivo pharmacokinetic behavior.
- Familiarity with modern machine learning approaches such as deep learning, generative algorithms, or explainable AI in drug discovery contexts.
- Experience with modern scientific software or web application development frameworks, including JavaScript-based front-end technologies (e.g., Svelte).

- Knowledge of SQL, databases, Linux-based environments, and scalable data engineering patterns for scientific workflows.
- Experience working with small molecules, peptides, RNAs, or other modalities in discovery-stage data analysis.

This is a dual posting. The final level & 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

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:

- Senior Expert: 102,200.00 - 189,800.00 CHF Annual

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.

In addition to your base salary, you may be eligible for a performance-based bonus depending on certain performance parameters. Long-term equity awards granted at group level may also be part of your package. Further details will be provided during the application process.

Pay equity is a fundamental principle of our employment policy and reflects our commitment to create a diverse, equitable and inclusive environment that treats all employees with dignity and respect, as outlined in our Code of Ethics.

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.

Commitment to Diversity and Inclusion / EEO

Novartis is committed to building an outstanding, inclusive work environment and diverse teams' representativeof the patients and communities we serve.

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 a reasonable accommodation for any part of the recruitment process, or in order 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
CHF102,200.00 - CHF189,800.00
Дивизион
Biomedical Research
Business Unit
Research
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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