

Senior Expert Science & Technology – Downstream Process Modelling

Job ID
REQ-10074628
мар 26, 2026
Швейцария

Сводка

Location: Basel, Switzerland #onsite

Role Purpose:

As a Senior Expert Science & Technology in Downstream Process Development, you will play a key role in advancing model-based development and decision making for biologics purification processes. You will develop, apply, and deploy mechanistic and hybrid models with a strong focus on chromatography, while also covering other downstream unit operations and their interconnection into integrated process flows.

This role combines deep scientific expertise, hands-on experimental work, and digital implementation. You will work closely with project teams, process development scientists, data scientists, and manufacturing stakeholders, and you will be an active member of a global modelling community shaping the future of downstream development at Novartis.

About the Role

In this role, you will:

- Develop and apply downstream process models for biologics, with a strong emphasis on chromatography (e.g. IEX, HIC, MMC, affinity) and their underlying physicochemical principles.
- Extend modelling approaches to other downstream unit operations (e.g. filtration, UF/DF, viral inactivation) and connect individual steps into integrated DSP models to support process understanding and optimization.
- Design, plan, and execute laboratory experiments to generate high-quality data for model development, calibration, and validation, working hands-on in the lab when required.
- Use modelling to support process design, scale-up, troubleshooting, robustness studies, and decision making across early and late development.
- Implement and deploy models using Python, including development of user-friendly tools or apps that enable broader adoption by project teams and stakeholders.
- Translate complex modelling results into clear, actionable insights for multidisciplinary audiences, including process scientists, project leaders, and management.
- Collaborate and communicate effectively with internal and external stakeholders, ensuring alignment between modelling activities, experimental work, and project objectives.
- Actively contribute to and help shape the global modelling community, sharing best practices, methodologies, and innovations across sites and functions.
- Contribute to scientific documentation, technical reports, and regulatory-relevant deliverables as required.

What you will bring

Education & experience

- MSc, PhD, or equivalent experience in Biotechnology, Chemical Engineering, Biochemistry, or a related field.
- Several years of experience in biologics downstream process development, with demonstrated focus on process modelling.
- Strong, hands-on expertise in chromatography, including mechanistic understanding of separation phenomena.

Technical expertise

- Proven experience in downstream process modelling, ideally including chromatography modelling, parameter estimation, scale-down/scale-up concepts, and integration of multiple unit operations.
- Ability to design and run experiments to support model development and validation.
- Strong programming skills in Python, with experience in building reusable tools, workflows, or applications for broader user groups.
- Familiarity with data analysis, visualization, and model deployment concepts is a strong advantage.

Commitment to Diversity and Inclusion: Novartis is committed to building an outstanding, inclusive work environment and diverse teams' representative of 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 inclusion.switzerland@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.
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Дивизион
Development
Business Unit

Development
Место
Швейцария
Сайт
Basel (City)
Company / Legal Entity
C028 (FCRS = CH028) Novartis Pharma AG
Functional Area
Research & Development
Job Type
Full time
Employment Type
Regular
Shift Work
No

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