

# Postdoc Drug Product Development Data/Computational Scientist Oligonucleotide Platform

Job ID  
REQ-10049112

4月 30, 2025

Switzerland

## 摘要

We are seeking a highly motivated and talented post-doctoral fellow who will bring their scientific curiosity and engineering creativity to engage in the development and application of predictive methods to oligonucleotides formulation development and characterization.

## About the Role

This is a unique opportunity to work in a highly interdisciplinary environment at the intersection of pharmaceutical sciences, analytics, molecular and process modeling and data science. In this role you will become part of the digital transformation to drive modelling-driven decision making and optimization of the drug development process. Your scientific expertise will be used to deliver value to drug formulation projects in terms of speed, quality, cost, and sustainability.

The successful candidate will join a dynamic team and collaborate with other experts across different functions.

Location : Campus Basel

Duration : 2 years

Start : as soon as possible

Your responsibilities will include:

- Develop and validate computational models, both mechanistic and data-driven, to evaluate formulation properties, specifically viscosity, as a function of chemical and physical stressors including pH, ionic strength, temperature, concentration, shear rate etc.
- Develop and validate computational models for the manufacturing and delivery (injectability) of oligonucleotide formulations.
- Analyze and interpret the rheological behavior of oligonucleotide formulations under various stress conditions.
- Work closely with experimental teams in defining synergistic experiments and simulations and their tangible outcomes.
- Communicate your work in a clear manner to both experts and non-experts in the field.
- Prepare and present research findings in scientific publications and conferences.

Minimum Requirements:

What You'll Bring to the Role:

- PhD in chemical engineering, pharmaceutical sciences, material sciences, process engineering, mechanical engineering, physics, applied mathematics or similar.
- Strong background in computational modeling and simulation techniques, for example computational fluid dynamics, molecular dynamics, Monte Carlo simulations, finite element analysis etc.
- Experience with solutions comprised of charged particles.
- Good understanding of chemical properties of molecules and materials and their contribution to solution and suspension properties.
- Good understanding of mass, momentum and heat transfer phenomena.
- Proficiency in programming languages such as Python, C++.
- Strong communication skills (English) and data visualization skills
- Excellent analytical and organizational skills; effective and creative problem-solver.
- Flexible and open minded, ability to work independently in multidisciplinary teams and multicultural environment.

Of advantage:

- Experience in working with oligonucleotides or peptides
- Experience in molecular modeling

- Understanding of formulation unit operations and processes
- Knowledge of rheology and its application to pharmaceutical formulations.
- Expertise in data science applied to scientific problems

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部门

Development

Business Unit

Innovative Medicines

地点

Switzerland

站点

Basel (City)

Company / Legal Entity

C028 (FCRS = CH028) Novartis Pharma AG

Functional Area  
Others

Job Type  
Full time

Employment Type  
Early Career (Fixed Term)

Shift Work  
No

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