

Innovation Postdoctoral Fellow in 3D-Electron Diffraction (3D-ED)

Job ID
REQ-10082768

7月 02, 2026

Switzerland

Available in: English

摘要

We are excited to invite applications for the Novartis Biomedical Research Postdoctoral Fellowship Program, a unique training opportunity designed for exceptional early-career scientists eager to tackle some of the most challenging problems in biomedical research and drug discovery.

Location: Basel, Switzerland

Duration: 3 years

Program start date: October 1, 2026

Application deadline: July 16, 2026 EOB

About the Role

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As a Postdoctoral Research Fellow, you will join Global Discovery Chemistry (GDC) in Basel and pursue an innovative research project at the forefront of biomedical science and drug discovery. You will work alongside leading scientists in a highly collaborative, multidisciplinary environment while gaining exposure to the broader ecosystem that translates scientific discovery into medicines.

Our fellows are empowered to ask bold scientific questions, apply cutting-edge technologies, and develop approaches that have the potential to transform patient care.

Research Opportunity

Crystal structure determination plays a critical role in modern drug discovery and development, supporting molecular design, stereochemical assignment, solid-form characterisation, and regulatory submissions. However, many pharmaceutical compounds crystallise only as nanocrystals or highly heterogeneous materials, placing them beyond the reach of single-crystal X-ray diffraction, which relies on sufficiently large crystals.

This postdoctoral project aims to advance and expand the application of 3D-Electron Diffraction (3D-ED/MicroED) at Novartis and offers a unique opportunity to contribute to the future development of crystallographic methods for challenging pharmaceutical compounds. The Fellow will develop and apply innovative experimental and computational approaches for structure determination, stereochemical assignment, and solid-form characterisation, working at the interface of crystallography and pharmaceutical research.

Based in the Diffraction Lab in GDC in Basel, the Fellow will collaborate closely with experts in structural and materials science and computational chemistry, contributing to establish next-generation structural characterisation capabilities and accelerate decision-making across drug discovery and development at Novartis.

Why Join the Program?

The Novartis Biomedical Research Postdoctoral Fellowship Program is designed to develop the next generation of scientific leaders, powering the future of medicine, through rigorous research, and immersive learning experiences, such as implementation of AI tools in biomedical research.

Postdoctoral Research Fellows benefit from:

- Guidance from accomplished scientific leaders and subject matter experts
- Access to advanced technologies, platforms, and research capabilities
- Collaboration across disciplines and organizational boundaries
- A global and diverse community of postdoctoral fellows
- Dedicated programming designed to help fellows thrive throughout their careers.
- Personalized experiential learning opportunities through a Postdoc Practicum that empower fellows to explore new scientific domains, build cross-functional expertise, and expand their impact beyond their primary research project.
- Opportunities to present research, publish in leading journals, and build an international scientific network

We are entering a new era of biomedical research breakthroughs through the convergence of

biology, technology, and artificial intelligence tools, and fellows are also supported in engaging with these emerging approaches.

This is a full-time training position of up to three years in duration.

Reimagining Medicine Together

At Novartis, our purpose is to reimagine medicine to improve and extend people's lives. Through this program, you will grow as a scientist and future leader while contributing to discoveries that may ultimately benefit patients worldwide.

Key Responsibilities

- Bring your scientific expertise and curiosity to the team and advance the use of 3D-ED to expand structural characterisation capabilities at Novartis
- Develop criteria and best practices for the analysis of pharmaceutical compounds by 3D-ED
- Implement and advance 3D-ED methodologies to stereochemical assignment, polymorphism, and solid-form characterisation of pharmaceuticals
- Drive innovation in 3D-ED data analysis, structure refinement, and analytical workflows by combining experimental and computational approaches
- Apply 3D-ED to generate structural insights that support projects across Research, Development and Commercial departments at Novartis
- Support the integration of 3D-ED into the established crystallography workflows of the Diffraction Lab
- Communicate research findings through publications, presentations, and interactions with the internal and external scientific communities

Essential Requirements

- PhD (or equivalent doctoral degree) in a relevant scientific discipline completed prior to the fellowship start date. The program is intended for scientists immediately following their PhD training (PhD graduation in 2026)
- Demonstrated record of scientific achievement (publications, presentations, patents, or equivalent)
- Strong commitment to learning, innovation, and professional development
- Solid background in crystallography with expertise in structure determination of molecular crystals using 3D-ED as well as experience in single-crystal X-ray diffraction
- Demonstrated ability to independently collect and analyse 3D-ED data

- Expertise in the crystal structure refinement programs SHELXL and/or Jana
- Experience handling complex crystal structures (e.g. modelling of disorder and twinning)
- Collaborative team player with excellent communication skills and proven ability to work effectively in multidisciplinary environments, using English as the working language

Desirable Requirements

- Experience with 3D-ED dynamical refinement using Jana and experience with powder X-ray diffraction
- Experience with Python and/or C/C++ programming is an additional asset

Important:

Please submit your CV and cover letter by July 16, 2026 EOD.

In your cover letter, please describe your research interests, career aspirations, and how participation in the Novartis Biomedical Research Postdoctoral Fellowship Program will support your long-term development.

The start date for the 2026 Novartis BR Postdoctoral Fellowship Program cohort is October 1, 2026. Please confirm your availability to meet this date, or indicate any constraints, in your cover letter.

Please note that we can only accept applicants who are eligible to work in Switzerland.

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
Biomedical Research

Business Unit
Research

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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