Expert II - Biologics Structural Bioinformatician/Computational Chemist (80-100%*)

Job ID
REQ-10050376

5 20, 2025

Switzerland

Location: Basel, Switzerland
Full time, onsite, #LI-Onsite

The Biologics Research Center (BRC) at Biomedical Research is seeking a highly skilled Structural Bioinformatician /computational chemist specializing in protein structure predictions, protein-protein/ ligand interactions, molecular dynamics simulations, and protein/DNA /RNA structure analysis. The ideal candidate will join our Bioinformatics and Biotherapeutics Modelling team and contribute to our innovative biologics projects.

About the Role

- Your responsibilities will include:

- Actively contribute to the biologics discovery pipeline and innovation-related programs by applying structure modeling methods to design novel molecules, optimize lead candidates, and design reagents at different stages of the drug discovery process.
- Assist scientists across the organization in the analysis and design of biologics sequences and structures, including xRNA therapeutic, advancing projects from early discovery to optimization stages.
- Apply, develop, and improve computational structural modelling methods to analyze data and design functional properties of drug candidates.
- Collect, analyze, and integrate diverse types of data, including structural data from different projects, to build predictive models, formulate hypotheses, and generate actionable knowledge.
- Contribute to the design, utilization, and improvement of bioinformatics tools in the field of molecular modelling to analyze sequence and structure data for knowledge generation.
- Work closely with experimental scientists, fostering a collaborative and multidisciplinary environment to drive project success.

What you will bring to the role

To be successful in this role, the ideal candidate should possess the following qualifications and skills:

- Educational Background: Recent Ph.D. (graduated within the last 3-6 months), MS (with 4+ years of relevant industry research experience) or equivalent degree degree in theoretical/ Computational chemistry, bioinformatics, structural biology, or a related field.
- Preferable experience includes structure-based drug design, QM/MM calculations, MD simulations (with enhanced sampling), molecular modeling, molecular design, and AI.

- Experience: Prior experience in the pharmaceutical or biotechnology industry is advantageous but not essential. Experience in a research or academic setting with a focus on biologics , including RNA or antibody based therapeutics, is also valuable.
- Technical Expertise: Proficiency in computational structural biology, molecular modeling, molecular dynamics simulations, and structural bioinformatics tools and software (MOE, Schrodinger, Rosetta, or similar) for structural analysis and structure-based biologics design.
- A comprehensive understanding of RNA structural biology and RNA-ligand interactions is preferred.

- AI/ML Proficiency: Experience in incorporating AI/ML models into in silico workflows, as well as monitoring performance, retraining, and updating models, is advantageous.
- Analytical Skills: Strong ability to analyze and interpret complex biological data, particularly in the context of protein sequences and structures.
- Programming Skills: Competence in programming languages such as Python, R, or similar, and experience with bioinformatics databases and tools. Familiarity with version control systems like Git for collaborative coding and project management is a plus.
- Innovation: A creative and innovative mindset, with a keen interest in advancing the field of biologics through cutting-edge computational methods.
- Problem-Solving: Demonstrated ability to develop hypotheses, design experiments, and drive projects to successful completion.
- Collaborative Spirit: Excellent communication and teamwork skills, with the ability to work

effectively in a multidisciplinary environment.

*Restrictions on flexible working and reduced working time may apply and can be discussed at interview stage if required

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

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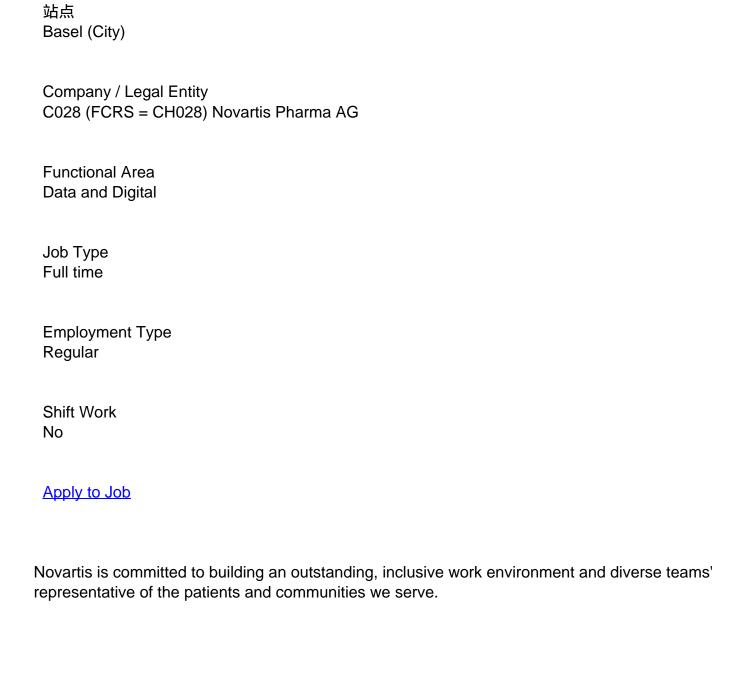
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Biomedical Research

Business Unit
Pharma Research

Switzerland

Basel (City)

Company / Legal Entity
CO28 (FCRS = CHO28) Novartis Pharma AG

Functional Area
Data and Digital

Job Type
Full time

Employment Type
Regular

Shift Work
No

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representative of the patients and communities we serve.

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