

# Data Science Innovation Postdoctoral Fellow: Cancer Combination Therapy

Job ID  
REQ-10014830  
Jul 09, 2024  
Estados Unidos

## Resumen

We are thrilled to open applications for our Data Science Innovation Fellowship. This applied 3-year research program is set to change the way we approach drug discovery, offering fellows a unique chance to train in data science and AI (DS&AI) for biomedical research. As a talented fellow, you will learn to apply your computational skills to make a difference for patients and reimagine medicine at Novartis. We are thrilled to open applications for our Data Science Innovation Fellowship. This applied 3-year research program is set to change the way we approach drug discovery, offering fellows a unique chance to train in data science and AI (DS&AI) for biomedical research. As a talented fellow, you will learn to apply your computational skills to make a difference for patients and reimagine medicine at Novartis.

## About the Role

Internal Job Title: Innovation Postdoctoral Fellow

Location: Cambridge, onsite

### About the role:

We are thrilled to open applications for our **Data Science Innovation Fellowship**. This applied 3-year research program is set to change the way we approach drug discovery, offering fellows a unique chance to train in data science and AI (DS&AI) for biomedical research. As a talented fellow, you will learn to apply your computational skills to make a difference for patients and reimagine medicine at Novartis.

Drug hunting is a team sport, and you will gain experience in DS&AI for drug discovery as part of a multi-disciplinary team in Biomedical Research. You will drive innovation by deploying cutting-edge data approaches in collaboration with a vibrant and diverse community of over 300 data scientists globally. The program provides a unique platform to work on real-world, biomedical data at scale, rarely accessible in academia. Under the guidance of experienced mentors, you'll embark on a journey of professional growth, benefiting from a tailored training program with built-in time for a mini-sabbatical in other areas of Novartis and for attending conferences/workshops.

Biomedical Research is the home of a vibrant postdoctoral community connected through science and events supporting the professional growth of our fellows, including monthly seminars and an annual Research Day Symposium. Seize this chance to be at the forefront of DS&AI and shape the future of drug discovery!

Resistance to cancer therapies often arises because not all cancer cells in the tumor are sensitive to the treatment, and hence combination treatments may be needed to effectively eliminate multiple subpopulations

of cancer cells. This is bolstered by the emerging notion that most clinically successful cancer drug combinations demonstrate independence, with the combination being simply additive rather than synergistic (Hwangbo et al. Nature Cancer 2023). This fellowship project aims to leverage patient tumor single-cell data to design additive combination therapies with non-overlapping resistance mechanisms. This will provide preclinical strategies to increase the likelihood of clinical trial success.

Start date: Winter 2024

### **Key responsibilities**

As a Data Science Innovation Fellow, you will:

- Work in a collaborative ecosystem with data scientists, wet lab biologists, and other postdoctoral fellows to pursue cutting edge strategies for developing more effective cancer therapy
- Push the limits of biological and computational knowledge in tandem to achieve innovative results
- Develop skills and awareness of real-world drug discovery and development in a supportive and collaborative training environment
- Identify existing computational methods, or develop new methods as needed, for predicting the drug response of individual cancer cells
- Develop biological rationale for why given drug combinations may or may not be additive versus synergistic or antagonistic
- Leverage patient tumor data to predict which patient populations would be most likely to respond to a given combination therapy

### **Role requirements:**

- PhD in in computational biology, bioinformatics, systems biology, biological engineering, data science, statistics, computer science, biology, chemistry, physics, or a related field (PhD students in the last year of their thesis work are eligible to apply)
- Familiarity with fundamental concepts in bioinformatics, statistics, and cell biology
- Experience analyzing high-dimensional data sets, preferably 'omics data sets (e.g., single-cell RNA-seq, bulk RNA-seq, epigenetics, proteomics)
- Knowledge of cancer biology, genomics, and/or immuno-oncology preferred
- Fluency in one or more programming languages (e.g., Python, R, MATLAB)
- Strong publication record or other scientific achievements (i.e., awards, patents, grants)
- Excellent analytical, communication, presentation and organizational skills
- Passion for research and boundless curiosity #DSIF

### **How to apply**

Please submit your CV and cover letter by **July 29** for consideration. Please make sure to discuss in the cover letter how this training program will help you fulfill your career goals.

Why Novartis: Our purpose is to reimagine medicine to improve and extend people's lives and our vision is to become the most valued and trusted medicines company in the world. How can we achieve this? With our people. It is our associates that drive us each day to reach our ambitions. Be a part of this mission and join us! Learn more here: <https://www.novartis.com/about/strategy/people-and-culture>

You'll receive: You can find everything you need to know about our benefits and rewards in the Novartis Life Handbook: <https://www.novartis.com/careers/benefits-rewards>

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The pay rate for this position at commencement of employment is expected to be \$82,000 per year; however, base pay offered may vary depending on multiple individualized factors, including market location, job-related knowledge, skills, and experience. The total compensation package for this position may also include other elements, including a sign-on bonus, restricted stock units, and discretionary awards in addition to a full range of medical, financial, and/or other benefits (including 401(k) eligibility and various paid time off benefits, such as vacation, sick time, and parental leave), dependent on the position offered. Details of participation in these benefit plans will be provided if an employee receives an offer of employment. If hired, employee will be in an "at-will position" and the Company reserves the right to modify base salary (as well as any other discretionary payment or compensation program) at any time, including for reasons related to individual performance, Company or individual department/team performance, and market factors.

Join our Novartis Network: If this role is not suitable to your experience or career goals but you wish to stay connected to hear more about Novartis and our career opportunities, join the Novartis Network here: <https://talentnetwork.novartis.com/network>

**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>

**Join our Novartis Network:** Not the right Novartis role for you? Sign up to our talent community to stay connected and learn about suitable career opportunities as soon as they come up: <https://talentnetwork.novartis.com/network>

### **EEO Statement:**

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### **Accessibility & Reasonable Accommodations**

The Novartis Group of Companies are committed to working with and providing reasonable accommodation to individuals with disabilities. If, because of a medical condition or disability, you need a reasonable accommodation for any part of the application process, or to perform the essential functions of a position, please send an e-mail to [us.reasonableaccommodations@novartis.com](mailto:us.reasonableaccommodations@novartis.com) or call +1(877)395-2339 and let us know the nature of your request and your contact information. Please include the job requisition number in

your message.

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Estados Unidos

Sitio

Cambridge (USA)

Company / Legal Entity

U175 (FCRS = US175) Novartis Institutes for BioMedical Research, Inc.

Functional Area

Research & Development

Job Type

Full time

Employment Type

Regular

Shift Work

No

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