

Senior Principal Scientist / Assoc Director, Oncology Translational Research

Job ID

REQ-10079981

Jun 22, 2026

LOC_US

About the Role

Key Responsibilities

Digital Pathology and Imaging Strategy

- Develop and deploy scalable workflows for pathology whole-slide image acquisition, processing, analysis, and interpretation
- Apply AI/ML and quantitative image analysis to address biological, translational, and biomarker questions in human and preclinical samples
- Provide expertise in digital pathology, spatial analytics, and AI-enabled biomarker quantification across oncology programs
- Evaluate emerging computational imaging approaches that strengthen OPB biomarker capabilities and decisional data delivery

HALO AI Support and Cross-Site Harmonization

- Serve as a subject matter expert for HALO and HALO AI workflows and drive harmonization across Cambridge and Basel
- Build robust, reproducible, and well-documented analytical processes that improve operational resilience and cross-site consistency
- Improve image data organization, sharing, and best practices to support collaboration with Oncology Data Science, Data42, and enterprise AI initiatives

AI/ML-Enabled Image Analysis

- Build, optimize, and apply AI/ML models and reproducible workflows for whole-slide, multiplexed, and high-plex tissue imaging
- Use tools such as HALO and HALO AI for segmentation, classification, feature extraction, spatial analysis, and biomarker scoring
- Translate image-derived outputs into clear biological insights that inform project decisions

High-Plex Imaging and RareCyte Orion Analysis

- Develop and implement pipelines to process, analyze, visualize, and interpret RareCyte Orion and other high-plex imaging data
- Partner with OPB scientists to define fit-for-purpose analytical approaches for multiplexed tissue imaging studies
- Integrate high-plex imaging outputs with broader biomarker and translational datasets
- Establish quality control, documentation, and reporting standards that support innovative use of multiplexed imaging in oncology

Cross-Functional Collaboration and Impact

- Partner with scientists, pathologists, physician-scientists, computational biologists, data scientists, and project teams to design, analyze, and interpret tissue-based studies

- Engage across Oncology Translational Research and broader Novartis Biomedical Research to identify stakeholder needs, address workflow gaps, and implement practical solutions
- Communicate image analysis strategies, recommendations, and findings clearly to multidisciplinary teams while contributing to a collaborative culture of scientific excellence and innovation

Essential requirements

- This is a dual posting. The final level of the offered role will be determined by the hiring team based on the skills, experience, and capabilities required to perform the role at the offered level.
- PhD or MS in biology, bioinformatics, biomedical engineering, computational biology, data science, pathology, or a related field
- Minimum 5 years of industry experience
- Significant experience in digital pathology, computational image analysis, imaging data science, translational oncology, or tissue-based biomarker research
- Expertise with image analysis tools such as HALO and experience developing, implementing, and applying AI/ML models to tissue images
- Demonstrated success applying advanced imaging solutions to pathology and translational research workflows, including high-resolution whole-slide and gigapixel image datasets
- Strong understanding of tissue-based biomarker development, oncology biology, and translational research
- Strong organizational, communication, and problem-solving skills, with the ability to engage stakeholders, identify process gaps, and drive next steps
- Ability to work effectively in multidisciplinary, matrixed teams and contribute in a collaborative, innovative, and self-directed way

Desirable Qualifications

- Background in cancer biology, immuno-oncology, radioligand therapy, spatial biology, or tumor microenvironment biology
- Experience supporting oncology drug discovery or early clinical development with image-based biomarker strategies and spatial scoring approaches for pharmacodynamic, indication, isotope, or patient selection decisions
- Familiarity with RareCyte Orion or other multiplexed/high-plex tissue imaging platforms, including machine learning and computational methods for tissue image analysis
- Proficiency in Python or R
- Experience harmonizing digital pathology workflows across sites, teams, or software environments, with familiarity in image data centralization, digital pathology infrastructure, FAIR principles, or enterprise data platforms
- Experience collaborating with oncology data science, informatics, translational medicine, or enterprise AI teams
- Scientific visibility through publications, presentations, or collaborations in digital pathology, oncology biomarkers, image analysis, or spatial biology

Novartis Compensation and Benefit Summary:

The salary for this position is expected to range between \$138,600.00 - \$257,400.00 USD Annual per year.

The final salary offered is determined based on factors like, but not limited to, relevant skills and experience, and upon joining Novartis will be reviewed periodically. Novartis may change the published salary range based on company and market factors.

Your compensation will include a performance-based cash incentive and, depending on the level of the role, eligibility to be considered for annual equity awards.

US-based eligible employees will receive a comprehensive benefits package that includes health, life and disability benefits, a 401(k) with company contribution and match, and a variety of other benefits. In

addition, employees are eligible for a generous time off package including vacation, personal days, holidays and other leaves.

Role Requirements

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 \(PDF 30 MB\)](#)

Division

DIV_RE

Business Unit

Research

Location

LOC_US

Site

Cambridge (USA)

Company / Legal Entity

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

Functional Area

FCT_RD

Job Type

Full time

Employment Type

Regular

Shift Work

No

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