

Position Title: 202606-116179 Digital Pathologist

In Roche's Pharmaceutical Research and Early Development organisation (pRED), we make transformative medicines for patients to tackle some of the world's toughest unmet healthcare needs. At pRED, we are united by our mission to transform science into medicines. Together, we create a culture defined by curiosity, responsibility, and humility, where our talented people are empowered and inspired to bring forward extraordinary, life-changing innovation at speed.

At the intersection of science and innovation, pRED's Pharmaceutical Sciences (PS) organisation enables the discovery and development of safe and effective therapeutics at optimal doses in relevant populations with a vision to power translation, continuously improve the accuracy of our predictions and accelerate the development of tomorrow's medicines. By seamlessly integrating our three core pillars—Translational Safety, Translational Pharmacology, and Biomarkers—we drive end-to-end asset development across the entire value chain, from target assessment to on-market support. Our mission is to continuously improve predictive accuracy, optimise dosing strategies for the right patient populations, and accelerate the development of tomorrow's safe and effective therapeutics.

This position is located in Pathology and Applied Safety Science, a department within the Pharmaceutical Sciences function. We drive the non-clinical safety assessment of drug candidates from small molecules to complex biological products during the discovery and development phases at Roche.

The Opportunity

As an engaged Digital Pathologist, you will play a pivotal role in the development, validation, and implementation of pathology investigations and the application of computational pathology approaches for translational safety assessment. Your primary responsibility will be to propose, conduct, and report computational toxicologic pathology approaches to understand mechanisms of toxicity, leveraging modern tools to maximise scientific insights, drive innovation, and advance our therapeutic pipeline. You will support the automation of pathology algorithms, workflows, and platforms, remaining accountable for the scientific delivery of pathology data to inform risk assessment across projects ranging from small molecules to complex biological products.

- **Core Portfolio Toxicologic Pathology:** Provide expert pathology support in preclinical development, aligning toxicity study designs with current science and regulatory guidelines. Conduct qualitative and quantitative (histo)pathologic evaluations for discovery and development toxicology studies, including GLP-compliant studies. Peer-review histopathologic data and interpretations from internal or CRO pathologists per established SOPs. Integrate clinical pathology data (haematology, clinical chemistry) with histopathology findings for a holistic, mechanistic interpretation of toxicity. Deliver clear, concise test result interpretations and author pathology sections for Research Reports, regulatory filings (e.g., IND/CTA), and governance presentations.
- **Algorithm Architecture & Image Analysis Deployment:** Propose, build, test, and implement custom image analysis solutions and algorithms to automate cell and biomarker quantification on scanned tissue. Oversee the integration of ML and non-ML software to detect, segment, and score complex tissue morphologies. Extract high-dimensional spatial features and quantitative metrics from multiplexed or

standard IHC and ISH slides. Transform complex tissue images into structured, clean data arrays to uncover subtle or sub-visual drug-induced tissue alterations.

- **Software Engineering & Platform Collaboration:** Develop, upgrade, or customise end-to-end (E2E) Python scripts, processing pipelines, automated data visualisation tools, and digital pathology dashboards. Collaborate with data engineering and software development teams to build, maintain, and deploy code using standard software engineering practices. Leverage specialised software ecosystems (e.g., Patholytix System, SLIMS, Arvados) to ensure code scalability and streamlined data transfers across pathology.
- **Quality, Compliance, and Industry Strategy:** Ensure all digital pathology and image analysis solutions comply with relevant validation guidelines, particularly for GLP study components. Support the evolution of pathology SOPs to encompass modern digital and computational workflows. Foster an external scientific presence and leadership by participating in cross-industry working groups, digital pathology consortia, international congresses, and peer-reviewed publications. Establish and maintain strong connections with Key Opinion Leaders (KOLs) and external consultants to continuously onboard advancements in digital toxicologic pathology.
- **Matrix Collaboration & Process Optimisation:** Serve as a matrix lead and collaborative partner within multidisciplinary teams, connecting pathology, computational capabilities, and discovery biology. Continuously optimise digital imaging workflows, data flow infrastructure, and sample turnaround to drive pipeline efficiency.
- **Mentorship & Economic Thinking:** Supervise, train, and coach technicians, PhD students, and postdocs entering the computational pathology domain, cultivating a high-performance, curiosity-driven culture. Align computational resource allocation and algorithm development with the strategic, commercial, and operational priorities of the broader portfolio.

Who You Are

- **An Experienced Pathologist:** You hold a degree in Veterinary Medicine (DVM or equivalent), and you are a board-certified veterinary pathologist (i.e., ECVF, ACVP). Ideally, you have a PhD in pathology, veterinary pathology, or a closely related scientific field, paired with practical experience in toxicologic pathology and histopathologic evaluations.
- **A Computational Expert:** You possess proven experience in developing custom image analysis algorithms, working with machine learning software, and deploying E2E Python scripts or processing pipelines.
- **A Scientist with deep understanding of histotechnique/technologies:** You have a solid understanding of tissue-based assays, such as immunohistochemistry (IHC), and of clinical pathology data integration to build holistic, mechanistic interpretations of toxicity.
- **Collaborative Mindset:** You are a strong communicator and relationship builder, adept at connecting pathology with computational capabilities and navigating multidisciplinary team environments.
- **A Quality-Minded Innovator:** You possess experience working within validated or GLP-compliant frameworks, with the ability to optimise data flows and align digital development with broader portfolio priorities.

At Roche, we aim high to deliver life-changing healthcare solutions. If you're ready to make a meaningful impact on patients and healthcare systems worldwide, this is the place for you.