

Cristina Rodríguez, PhD

Research facility leader · Imaging scientist · Builder of research operations tools

Preclinical Imaging Facility Manager, Molecular Imaging Research Facility (MIRF), The University of British Columbia · Vancouver, Canada

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 12 yrs at UBC's imaging core; 6 leading it	 17+ research groups served	 5 partner institutions	 25 active projects, latest report	 5 modalities · 3 UBC facilities	 60+ peer-reviewed papers
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Leadership profile

I lead UBC's small-animal in vivo imaging core, a PET, SPECT and CT facility that serves research groups across UBC, TRIUMF, SFU, BC Cancer and BC Children's Hospital. I set its scientific direction and service model, own its budget and pricing as a fully cost-recovered operation, hold its radiation-safety and animal-ethics compliance, report to institutional and scientific oversight, and lead the partnerships that bring studies in. I joined the lab in 2014 and helped build it into the facility I now run; beyond MIRF, I have helped two other UBC laboratories establish optical imaging and microCT capabilities, so my operating experience spans five modalities across three facilities.

What I bring to a leadership role is the combination of three things that rarely sit in one person: a research scientist's judgement (PhD in medicinal chemistry, more than sixty peer-reviewed publications, from Alzheimer's radiotracer design to quantitative theranostic imaging); an operator's discipline in budgets, compliance, governance and multi-partner delivery; and the ability to build the operational systems a facility needs, from standardised protocols and training programmes to the software (LabTools) that now runs its SOPs, isotope inventory, transfers and reporting and is used by other labs.

Leadership experience

Preclinical Imaging Facility Manager, MIRF

Dec 2020 – present

Molecular Imaging Research Facility, The University of British Columbia, Centre for Comparative Medicine · works alongside the facility's academic co-directors (Physics & Astronomy; Pharmaceutical Sciences)

STRATEGY AND OPERATING MODEL

- Define the service portfolio, pricing, capacity and investment priorities of UBC's preclinical PET, SPECT and CT core, built around a VECTOR/CT system that acquires all three modalities simultaneously, serving 17+ research groups and 25 active projects in the latest programme report.
- Own the budget of a fully cost-recovered facility: forecasting, pricing, cost measures and reporting. Rebuilt financial and activity reporting from Workday exports into a single ledger with calendar- and fiscal-year views, and benchmarked the rate card against comparable Canadian facilities to give leadership evidence-based options.
- Secured institutional and federal funding for the platform: a UBC Research Facilities Support Grant (2020–2021) and an NSERC Research Tools and Instruments award (2025, \$145,000) to upgrade two core instruments.

GOVERNANCE, COMPLIANCE AND OVERSIGHT

- Accountable for radiation-safety and animal-ethics compliance across every study; report to institutional and scientific oversight bodies including TRIUMF's Life Sciences committee.
- Manage the instrument lifecycle: quality control, calibration and cross-calibration programmes, service contracts and vendor relationships; author and version-control the facility's SOPs.

PARTNERSHIPS AND SCIENTIFIC LEADERSHIP

- Build and maintain the relationships that sustain the facility with principal investigators, departments and partner institutions; negotiate scope, timelines, responsibilities and cost for multi-year, multi-partner studies.

- Guide investigators from study design to interpretation and set the quantification methodology (calibrations, %ID/g, dosimetry workflows) behind 63 facility publications since 2014, including first-in-field imaging of actinium-225, mercury-197 and terbium theranostics.

PEOPLE, TRAINING AND CAPACITY BUILDING

- Supervise and train the technical team, students and facility users; lead the annual hands-on imaging workshops and one-to-one data-analysis training; co-instructor of PHAR 518 (Faculty of Pharmaceutical Sciences) since 2015.
- Advised another UBC laboratory through establishing a new microCT capability in its first year (2024–2025): site set-up, workflow design and operating practice, so the capability was sustainable from the start.
- Lead trainer and technical authority for optical imaging (Lago X) in the Pharmaceutical Sciences Analytical Suite since January 2024: standardised acquisition and analysis protocols and onboarded researchers from multiple labs to one reproducible workflow.

OPERATIONAL TECHNOLOGY

- Designed and built LabTools, a suite of software that replaced the facility's manual processes: SOP management with version control, decay-corrected radioisotope inventory with audit-ready records, an animal-transfer portal with automated forms and notifications, figure standardisation and quantification tools. Several are open source (cristinarod2.github.io/labtools) and adopted by other labs.

Lab Manager and Research Associate, Preclinical Nuclear Imaging

Oct 2014 – Dec 2020

The University of British Columbia

- Helped build UBC's preclinical PET, SPECT and CT platforms with investigators across UBC, TRIUMF and local biotech; established instrument QC, calibration and quantification workflows, user training and study documentation. This is the foundation the facility now stands on.

Beatriu de Pinós Postdoctoral Fellow, Medicinal Chemistry

Jul 2010 – Oct 2014

The University of British Columbia · independently funded; led the project

- Won competitive independent funding and led a multi-year project on theranostic agents for Alzheimer's disease, including a computer-aided drug design collaboration with Pharmaceutical Sciences (2013–2014); supervised undergraduate and graduate research students; recognised with the Alzheimer's Drug Discovery Foundation Young Investigator Scholarship (2012).

Professora Ajudant (Assistant Lecturer) and PhD researcher

2005 – 2009

Universitat Autònoma de Barcelona, Spain

- Doctoral research carried out in the UAB Department of Chemistry, with collaborations and research stays at other Barcelona institutions (ICMAB-CSIC, radiochemistry; IQS, amyloid disease), while holding a full-time teaching appointment in the department.

Selected initiatives

- **Making a cost-recovered facility legible to leadership.** Faced with a cost-recovered model and no central subsidy, built the evidence base leadership needs: unified financial and activity reporting with calendar- and fiscal-year views, and pricing benchmarked against comparable Canadian facilities.
- **Reproducible, quantitative imaging.** Built the QC, calibration and cross-calibration programmes, training and documentation that make MIRF's PET, SPECT and CT results consistent from study to study and from user to user, so investigators can publish quantitative data from the facility with confidence.
- **Five modalities across three facilities.** Carried that operating model to two other UBC laboratories: an optical imaging platform (fluorescence and bioluminescence, in vivo and ex vivo) where I became lead trainer, and a new microCT facility (below 20 µm resolution, for ex vivo skull and dental specimens and in vivo mice) which I advised through its first year.
- **LabTools.** Replaced folders of Word files, spreadsheets and email threads with purpose-built tools for SOPs, isotope inventory, animal transfers and figures; now shared openly with academic labs.

- **Teaching a discipline.** Eleven years co-teaching graduate in vivo imaging (PHAR 518) and running the facility's workshops, adapting technical material for audiences from chemistry, pharmaceutical sciences and other biomedical disciplines.

Scientific credentials

PhD, Medicinal and Bioinorganic Chemistry · Universitat Autònoma de Barcelona, 2009 · Excel·lent cum laude

MSc, Chemistry · Universitat Autònoma de Barcelona, 2005 · Matrícula d'Honor

Publications · More than 60 peer-reviewed papers (2007–2026), h-index 26 and 2,500+ citations (Google Scholar, September 2026), across medicinal chemistry, quantitative SPECT methodology, radionuclide theranostics and drug delivery, including J. Am. Chem. Soc., Angew. Chem., Nature Communications, ACS Nano and Physics in Medicine & Biology; corresponding author on three. Full list at [cristinarod2.github.io](https://github.com/cristinarod2) and [ORCID](#).

Recognition, invited lectures and professional service

Facility leadership · MILabs Image of the Year, Laboratory Award (2020) · World Molecular Imaging Congress, Managers of Molecular Imaging Labs (MOMIL) grant for leaders of small-animal imaging facilities (2019)

Research · Beatriu de Pinós Fellowship, one of four awarded in the Science panel (2010–2014) · Alzheimer's Drug Discovery Foundation Young Investigator Scholarship (2012) · ScienceDirect Top 25 most-downloaded article, Coordination Chemistry Reviews (2012) · first-prize research communication awards, ICBIC Vienna (2007) and Bioinorganic Scientific Meeting Barcelona (2005)

Invited lectures · Keynote, 4th Meeting of the Faculty of Chemical Engineering (CONFIQ-4), Mérida, Mexico (2016) · Canadian Society for Pharmaceutical Sciences (2019) · International Laboratory Animal Technician Week, Vancouver (2020) · MBF and CDM Annual Meeting, UBC (2024)

Service · Organizing committee, International Conference on the Scientific and Clinical Applications of Magnetic Carriers, since 2015 (most recent meeting ~330 participants) · peer reviewer for ACS and RSC journals · scientific translator of Theodore Gray's The Elements into Catalan (Black Dog & Leventhal)

Skills and languages

Leadership and operations · facility strategy and service design · budget ownership and cost-recovery models · pricing and benchmarking · radiation-safety and animal-ethics compliance · oversight reporting · multi-institution partnerships · vendor and contract management · SOP and quality systems · training programme design

Scientific · preclinical PET, SPECT, CT, optical and microCT · quantitative image analysis and dosimetry · radiopharmaceutical and theranostic development · study design and interpretation

Technical · Python · web applications (HTML/JavaScript) · 3D Slicer · Workday reporting · advanced Excel · scientific figure and communication design

Certifications · UBC radiation safety · chemical safety · biosafety · UBC Animal Care Services and CCM animal-user training, including Laboratory Rodents in Research · graduate directed-studies course in pharmacokinetics

Languages · English, Spanish, Catalan (native)