



## Microscopy Specialist (PC 10, T1 contract, 12 months)

Department of Pathology &  
Institute of Infectious Disease and Molecular Medicine

### Position overview

AMI invites applications from self-motivated, suitably qualified candidates for the role of **Microscopy Specialist**. This **12-month, fixed-term contract** position will support research within the Africa Microscopy Initiative Imaging Centre.

The Africa Microscopy Initiative (AMI) is an open science initiative which aims to support microscopy-based research in Africa through various programs to facilitate access to biological imaging equipment, including the operation of the purpose-built, open access AMI Imaging Centre. The AMI team works with researchers from across the continent in facilitating and carrying out biological research using advanced fluorescence microscopy applications. Moving forward, the AMI Imaging Centre will work collaboratively with researchers to pursue research topics of priority that include tuberculosis infection, drug discovery for infectious disease, and other areas of global health importance.

The main purpose of the Microscopy Specialist position is to assist and support the function of the AMI Imaging Centre by predominately facilitating activities related to microscopy-based research and the upkeep of advanced light microscope systems. These include working collaboratively with local and foreign researchers in designing, planning, and undertaking microscopy-based biomedical research using the microscopes and equipment available at the AMI Imaging Centre. As part of working on specific research projects, the role will be required to interact with researchers, review and determine the suitability of an experimental goal, co-develop the experimental approaches, and work on all necessary project-related preparations. When directly working with collaborators, the role is expected to provide technical expertise and knowledge, as well as hands-on support to best ensure the success of projects. In addition, other related laboratory (equipment maintenance, QC, and repair) and administrative tasks (purchasing, project reports, etc.) are expected. Overall, the position entails working closely with collaborative researchers from a large diversity of research backgrounds and conceptualising and designing experiments to pursue outstanding biomedical research objectives. While the position will drive the imaging pipeline within AMI, the Microscopy Specialist will work closely with collaborators and other team members in sample preparation and image analysis. The supportive mechanisms and processes that engender the research pipeline include maintaining the research equipment, reagents, chemicals, consumables, and laboratory space, planning the logistical components of research projects (pertaining to deliveries, ordering, and maintaining stocks, etc.), helping ensure all regulatory and biosafety compliance, organising and planning the equipment schedule in the laboratory, and teaching collaborators about microscopy and its application. This position will support AMI in its key aims to develop microscopy as a key and accessible research technology in Africa and will include being part of the organising team for initiatives such as the Imaging Africa workshop.

The successful appointee will be based at the Institute of Infectious Disease & Molecular Medicine (IDM) in the University of Cape Town's Faculty of Health Sciences. The position encourages independence in building and adapting processes to work with research collaborators, develop various aspects of the project, and conduct impactful research. The position may require intermittent travel within Africa and potentially globally.

### Requirements for the job:

- A PhD in life sciences (cell biology, physiology, neuroscience, immunology, microbiology, genetics, botany, biotechnology, bioengineering, biophysics, or related) with demonstrable experience in using quantitative fluorescence microscopy techniques in biological research as well as experience in sample preparation and image analysis; **OR**
- PhD in optical physics, mechatronic engineering, or related field of study with demonstrable experience in using quantitative fluorescence microscopy applications in biological research as well as optical alignment, calibration, and upkeep of imaging systems
- South African citizenship or current South African work visa.

### The following will be advantageous:

- Experience with laser scanning confocal microscopy applications (*i.e.*, LSM880).
- Experience with SIM and SMLM super-resolution microscopy applications.
- Experience with slide scanning microscopes and high-content imaging.
- Experience with fluorescence labelling and biological sample preparation.
- Image analysis experience (such as advanced ImageJ/Fiji pipelines, Python- or MATLAB-based data handling and image quantification).
- Interest in non-traditional academic career paths that diverge from standard PI trajectories.
- Experience with teaching and/or hosting training workshops.
- Experience in working in a core facility, including user training and support.



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### Responsibilities:

- Working with researchers from across Africa to ensure the success of microscopy experiments.
- Operating advanced light and fluorescence microscopes with a variety of applications and modalities.
- Ensuring the upkeep and function of microscopes and ancillary equipment within the laboratory.
- Providing support for general laboratory functions, including maintenance of general laboratory and inventory as well as assistance with university- lab-related administration (such as purchasing, deliveries).
- Managing and maintaining processes to support microscopy in the AMI Imaging Centre (*i.e.*, microscope maintenance and quality control).
- Providing expert review of AMI project proposals.
- Working with prospective collaborators in preparing all necessary components of incoming research projects (including compliance and biosafety requirements, logistics, sample handling pipeline, equipment requirements).
- Working in person with researchers drive forward research discovery and where possible teach fundamental microscopy concepts.
- Training and supporting users on microscopes.
- Monitoring the equipment booking system to ensure that instrument usage is properly scheduled, recorded, and aligned with AMI Imaging Centre policies and user access levels.
- Identifying and developing general methodologies as well as SOPs for equipment maintenance, sample preparation, microscopy applications, *etc.*
- Work with other AMI Imaging Centre staff, service engineers and technicians to support service visits.
- Involvement in microscopy workshops (through participation in the organising committee and/or teaching faculty).
- Keeping up to date on relevant literature related to applications of confocal, super-resolution, time-lapse, 3-D, high-throughput, and/or whole-slide microscopy techniques.
- Participation in team meetings including presentation at journal clubs.
- Identifying opportunities for training and career development.

The gross monthly income (before tax and UIF deductions) ranges between R53,298.42 and R62,703.92—dependent on prior experience. Please note: 12-month contracts are not eligible to receive employment benefits.

**To apply**, please e-mail the below documents in a **single pdf file** to Michael Reiche at [mike.reiche@uct.ac.za](mailto:mike.reiche@uct.ac.za):

- UCT Application Form (download at <http://forms.uct.ac.za/hr201.doc>),
- Position-specific cover letter, and
- Full Curriculum Vitae (CV).

**Please ensure the position title (Microscopy Specialist) and reference number (AMIMS001) are indicated in the subject line along with your first and last name.**

An application which does not comply with the above requirements will be regarded as incomplete and will not be reviewed.

Suitably qualified candidates will be contacted for an informal, remote/online interview. Information will be communicated in advance.

**Website:** <https://idm.uct.ac.za/> and <https://microscopy.africa/>

**Reference number:** AMIMS001

**Closing date:** 14 August 2025

**Expected starting date:** 1 September 2025 (negotiable)

*UCT is a designated employer and is committed to the pursuit of excellence, diversity, and redress in achieving its equity targets in accordance with the Employment Equity Plan of the University and its Employment Equity goals and targets. Preference will be given to candidates from the under-represented designated groups including candidates with disabilities. Our Employment Equity Policy is available at [www.hr.uct.ac.za/hr/policies/employ\\_equity](http://www.hr.uct.ac.za/hr/policies/employ_equity)*

**UCT reserves the right not to appoint.**