



Division of Clinical Pharmacology

PhD Student position in Pharmacometrics



The Pharmacometrics Group in the Division of Clinical Pharmacology at the University of Cape Town enthusiastically welcomes applications from bright and highly motivated science graduates who wish to join their research team to pursue a **PhD in the area of pharmacometrics**.

Pharmacometrics is an emerging discipline that uses mathematical and statistical tools to quantify drug, disease, and trial information to aid efficient drug development and/or regulatory decisions. It designs and applies mathematical models to describe the relationship between drug exposure (pharmacokinetics) and response (pharmacodynamics) for both desired and undesired effects and aims to include in such models the effects of individual patient characteristics.

Our Pharmacometrics Group has established **pharmacokinetic/pharmacodynamic modelling** expertise in **tuberculosis, HIV, and malaria**. It is active internationally and enjoys on-going collaborations and exchange programs with some of the most renowned modelling groups worldwide.

This PhD position is not only a great chance to learn a unique and highly sought set of professional skills geared towards a career either in academia or the pharmaceutical industry, but also a rewarding opportunity for a student in quantitative sciences to apply their expertise within the fascinating framework of biomedical research.

Conditions of Award

- Eligible candidates must hold a **master's degree (or equivalent*) in pharmacometrics, applied mathematics, engineering, (bio-)statistics, pharmacy/pharmaceutical sciences**, or a closely related discipline
- The fellowship involves advanced mathematical/statistical/computer modelling and simulation. **Strong quantitative skills are required**, and preferably experience with **computer programming** (e.g. R, Python, Matlab, C++) and data analysis.
- Previous experience in pharmacometrics and pharmacology would be advantageous, but not essential. Candidates without prior direct experience will have to show evidence of the ability to quickly get familiar with new analysis tools and techniques.
- The PhD student will be required to contribute to the research activity of the pharmacometric group:
 - The PhD projects will be linked with the clinical research interests of the division, i.e. predominantly the therapeutic areas of HIV, tuberculosis, and malaria, with a focus on drug-drug interactions and dose optimization for neglected populations, such as paediatrics and pregnant women.
 - Candidates interested in pursuing more methodological topics (but relevant to the clinical interests of the division) will be encouraged to do so.
- A good command of English, passion about scientific research, and the ability to work within a team are essential.

Scholarship and benefits

The successful candidate will be registered for a PhD at the University of Cape Town, and a tax-free scholarship covering tuition fees and supporting living expenses in Cape Town will be arranged. Financial assistance for relocation is also available. The scholarship is available for up to 4 years, with yearly renewal conditioned on satisfactory academic progress. During the course of the PhD programme, the student will be supported to attend international conferences and courses, as well as internships.

Application Requirements

Suitable candidates are required to complete the following steps:

- Submit to pharmacometrics@uct.ac.za:
 - A letter of interest/introduction (**max 1 page**) in which the candidate motivates their suitability.
 - A CV including academic and work experience.
 - The names and email addresses of at least three academics or employers who have agreed to stand as referees on behalf of the applicant (these will only be contacted if the candidate is selected for an interview)
 - Certified copies of academic transcripts (these can be sent later if the candidate's application is successful)
- Fill the following form: <https://forms.office.com/r/HvViRH92f>

Applicants for this call must submit their documentation by September 30th, 2024, but applications are welcome anytime and will be considered although no availability is guaranteed. Please note that the deadline differs from the general deadline for UCT applications.

Starting date: Q1 2025, or as soon as visa arrangements are completed thereafter.

Selection process

All eligible and complete applications will be evaluated based on skills, background, and experience. Shortlisted candidates will be contacted for an interview with the senior members of the team. The selection process takes into account the University's approved policies and procedures.

Please feel free to contact us on pharmacometrics@uct.ac.za with any enquiries.

*For candidates in the South African education system, please refer to below link:

<https://uct.ac.za/students/applications/doctoral-candidates>

For international candidates, a five year university degree is required.

The University of Cape Town reserves the right to make no awards at all, to cancel the award if the conditions are not met, and to affect changes to the conditions of the award. The University of Cape Town reserves the right to disqualify ineligible, incomplete and/or inappropriate applications.

