



**Division of Clinical Pharmacology**  
**Postdoctoral Fellowship**  
**in Pharmacometrics**



The Division of Clinical Pharmacology at the University of Cape Town invites applications for a **Postdoctoral Research Fellowship**. Highly motivated science/engineering/data science researchers are invited to contribute to the research and training activities of the **Pharmacometrics Group**.

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 fellowship is a unique chance to acquire an internationally sought-after set of professional skills geared towards a career either in academia or the pharmaceutical industry, and an opportunity for a scientist in quantitative sciences to apply their expertise within the fascinating and rewarding framework of biomedical research.

Conditions of Award

- Eligible candidates will have obtained a **PhD degree** in pharmacometrics, applied mathematics, engineering, (bio-)statistics, pharmacy/pharmaceutical sciences, or a closely related discipline within the past 5 years (candidates who are in the final stage of their PhD are also encouraged to apply)
- The fellowship involves advanced mathematical/statistical/computer modelling and simulation. **Strong quantitative skills** and experience with **computer programming** (e.g. R, Matlab, C++, python) and **data analysis** are required.
- Previous experience in pharmacometrics (NONMEM, Monolix) and pharmacology is highly desirable. Candidates with limited pharmacometric experience will have to show evidence of the ability to quickly get familiar with new analysis tools and techniques.
- The post-doctoral fellow will be required to contribute to pharmacometrics research activity of the division:
  - The research projects can be adjusted to the interests and skills of the candidate and will pertain to the research interests of the division, mostly (but not only) the pharmacokinetics and pharmacodynamics of drugs for infectious diseases, 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.
- As part of the candidate's professional development, limited mentorship and training of PhD students will be required.
- Passion about scientific research, the ability to communicate results and work within a team are essential.

- The successful candidate will be required to comply with the University of Cape Town's approved policies, procedures, and practices for the postdoctoral sector.  
<http://www.uct.ac.za/main/research/postdoc-research-fellowships>
- A good command of English, passion about scientific research, and the ability to work within a team are essential.

### Scholarship

A competitive scholarship is offered to the post-doctoral scholar based on skills and experience, which is tax-free, and tenable for up to 5 years and renewed annually, conditioned on satisfactory academic progress and availability of funds. Successful candidates will receive assistance with visa application and relocation costs. Additionally, funding is available to support attendance at international conferences and courses.

### Application Requirements

Suitable candidates are required to complete the following steps:

- Submit to [pharmacometrics@uct.ac.za](mailto:pharmacometrics@uct.ac.za):
  - A letter of interest/introduction (**max 1 page**) in which the candidate motivates their suitability.
  - A CV detailing academic and work experience (with conference presentations and publications).
  - The names and email addresses of three academics 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)
- Fill the following form: <https://forms.office.com/r/HvViRH92f>

**Applicants for this call must submit their documentation by September 30<sup>th</sup>, 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](mailto:pharmacometrics@uct.ac.za) with any enquiries.

*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.*

