



# Mathematical Modelers to join Neglected Tropical Diseases (NTDs) Modelling Consortium

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Call for Application

[pamca.org](http://pamca.org)

## Background:

Neglected tropical diseases (NTDs) are both treatable and preventable diseases that cause disfigurement, disability and impact life expectancy, education and long-term potential of affected individuals. They affect the poorest populations of the world, the 'bottom billion'. The World Health Organization has targeted several NTDs for elimination over the coming decade, and there is enormous global investment in these diseases due to their role in maintaining the cycle of poverty.

## The NTD Modelling Consortium:

The NTD Modelling Consortium is an international network of researchers developing mathematical models to understand the transmission dynamics of seven diseases. It is predominantly funded by the Bill & Melinda Gates Foundation. The consortium is led by Professor Hollingsworth and her team oversee the administrative and scientific management of the activities. They aim to provide high quality scientific advice to international and national policy makers, as well as provide input to a range of scientific activities. This requires not only excellence in multidisciplinary, collaborative research, but also a passion for effective communication of the outputs in novel and accessible ways. The NTD Modelling Consortium are developing mathematical models and statistical analyses to support national and international efforts to eliminate these diseases. The NTD Modelling Consortium works with a broad range of international partners, including intergovernmental bodies, national governments and non-governmental organizations. The Pan-African Mosquito Control Association (PAMCA) has recently joined this consortium. For more information about the consortium – visit <https://www.ntdmodelling.org/>

## Pan-African Mosquito Control Association (PAMCA)

The Pan-African Mosquito Control Association (PAMCA) is an African member-based professional body that brings together stakeholders in the field of vectors and vector-borne diseases control including scientists, public health professionals, vector control specialists, affected communities and other stakeholders to work together and adopt best practices for the control and elimination of vector-borne diseases in Africa and worldwide. PAMCA is looking to hire two mathematical modelers with MSc degree with interest to join a PhD program in mathematical modelling to join the team and be part of the consortium. For more information about PAMCA – visit [www.pamca.org](http://www.pamca.org)

## Reports to:

Reports to the Principal Investigator at PAMCA but a member of NTD modelling consortium with responsibility for carrying out research for a discrete area of a large project.

## Responsibilities / Duties

- Learn and understand the models developed by NTD modelling consortium
- Analyse qualitative and/or quantitative data from a variety of sources that might be required to inform the models
- Improve the evaluation of locally tailored responses to NTDs based on local setting
- Work with PAMCA's MosquitoDB and identify other existing platform across different countries

for mosquito surveillances that can be beneficial to the consortium

- Adapt MosquitoDB to manage historical and future vector related data that can be used to inform NTD models
- Support the development and/or evaluation of the web-apps-by ensuring that NTD model Graphical User Interfaces meet the program's requirement
- Support elimination efforts for NTDs using developed models
- Contribute ideas for new research projects.
- Develop research ideas related to NTD for a PhD program with a support from the consortium
- Collaborate in the preparation of research publications
- Represent PAMCA at different NTD modelling consortium related meetings
- Carry out collaborative projects with colleagues in partner institutions, and research groups.
- Perform any other duties assigned by Project Investigator

## Qualifications

- MSc holder in mathematical modelling, statistical modelling or a related field, or relevant experience
- Prior experience to analyze data using R statistical software or equivalent is a must
- Prior experience working on NTD modelling a plus
- Prior experience support diseases program in a country a plus
- Knowledge on NTDs a plus

## Selection criteria :

### Essential

- Hold MSc in infectious disease modelling, mathematical modelling, statistical modelling or a related field, or relevant experience.
- Possess sufficient specialist knowledge in infectious disease modelling to work within established research programmes.
- Possess advanced data analysis skills
- Ability to program using R statistical software or equivalent
- Ability to manage own academic research and associated activities.
- Previous experience of contributing to publications/presentations.
- Ability to contribute ideas for new research projects
- Excellent communication skills, including the ability to write for publication, present research proposals and results, and represent the research group at meetings.

### Desirable

- Experience of independently managing a discrete area of a research project.
- Experience of actively collaborating in the development of research articles for publication.
- Experience of modelling neglected tropical diseases.
- Experience with software programming and/or implementation
- Experience of working in or in collaboration with partners from low and middle-income countries.

## How to Apply :

The applicant should provide a CV and a supporting statement. The supporting statement must explain how you meet each of the selection criteria for the post using examples of your skills and experience. This may include experience gained in employment, education, or during career breaks. The application is open only for African or candidates based in Africa.

Your application will be judged solely on the basis of how you demonstrate that you meet the selection criteria stated in the job description.

All applications should be submitted to [careers@pamca.org](mailto:careers@pamca.org) by midday **17<sup>th</sup> February 2023**. Please use the email subject "Opportunity for the NTDs Modelling Consortium"

## Additional information:

Item	Description
Job Title	Mathematical Modeller –Neglected Tropical Diseases Modelling Consortium
Program	Research and Knowledge Management
Information	Only open to candidates from Africa or based in Africa with MSc degree in related field
Location	Remotely but arrangements will be discussed during the interview – must be willing to travel across Africa and outside Africa to work with consortium partners. Be willing to relocate to Ifakara Health Institute – PAMCA’s center of excellence - to be part of the data science and mathematical modelling team.
Salary and other benefits	This would be discussed with applicants during the interview based on PAMCA’s salary scale. There is a potential opportunity for a full funded Ph.D.
Hours	Full time
Contract type	Fixed term contract (one year) as a start



## Address

**PAN-AFRICAN MOSQUITO CONTROL ASSOCIATION (PAMCA)**  
**KEMRI Headquarters, Mbagathi Road**  
**P.O. Box 44455-00100 Nairobi, Kenya.**

## Phone

**+254 757 355 491.**

## Online

**Website : [www.pamca.org](http://www.pamca.org)**

**Application : [careers@pamca.org](mailto:careers@pamca.org)**