

## Summary

Building on the successes of previous years, members of the Malaria Centre have continued to play an important role in strengthening research capacity in malaria endemic countries, particularly in Sub-Saharan Africa. Members have been working with partners to build key competencies in numerous collaborating institutions, networks and consortia. Although focusing on malaria, capacity strengthening activities have had a wider impact on health research development in collaborating institutions due to the strategic nature of collaborations, the engagement of key stakeholders, and the implementation of activities that address identified development needs of institutions. All these activities accord with the mission of LSHTM.

### *Training malaria health researchers*

In 2010/2011, 34 students completed the Epidemiology and Control of Malaria module, and 13 students graduated with PhD degrees focusing on malaria. These included PhD students from malaria endemic countries who are based in LSHTM overseas collaborating institutions where they play a key role in transferring new technology and other skills to their peers. The majority of PhD students that have graduated continue to work on malaria or in related areas and the Centre ensures that they remain part of the Malaria Centre network through the website,

mailing list and opportunities to attend the annual Malaria Centre meeting.

Members also play an active role in the supervision and/or co-supervision of students from the Malaria Capacity Development Consortium (MCDC) and from a number of partners from consortia within the Wellcome Trust's African Institutions Initiative.

The Distance Learning Malaria Module continues to attract significant interest with 82 students registering on the module in 2010/2011. The recently updated module is also available, via the Malaria Centre website, as an open-access education resource to students and researchers from all over the world who are interested in gaining a broader understanding of malaria. Since its launch, over 800 individuals have registered and accessed the online module.

Members of the Malaria Centre, together with partners from the University of Groningen and Royal Tropical Institute are being funded by the Netherlands Initiative for Capacity Development in Higher Education to work in partnership with the Ifakara Health Research Institute in Tanzania to develop a Masters in Research for Public Health.

### ***Malaria Capacity Development Consortium***

MCDC strengthens both individual and institutional malaria research capacity in Africa. Working in partnership, the consortium of 5 African Institutions and 3 European Institutions currently supports 18 African scientists who will gain their PhD's from their host institutions. Students receive a wide ranging support package which includes local primary supervision, co-supervision from one of the EU partners, opportunities to spend up to one year in their co-supervisors EU institution and a comprehensive career development programme supported by an educational advisor based at Université Cheikh Anta Diop in Dakar. MCDC also supports an active cohort of 29 established malaria researchers through its

“Investigators” programme. Activities for Investigators focus on supporting them, as necessary, to establish their careers within their home institution. Support has been provided for continuing career development activities via a Personal Development Planning (PDP) programme, a grants scheme and an innovative mentoring programme.

This extensive network of over 40 malaria researchers is maintained through both the MCDC Community (an online resource centre) and via annual consortium meetings. Having demonstrated the benefits of PDP and mentoring to early stage researchers, MCDC is now working with its African partners to embed these activities within each institution as part of its institutional strengthening objective.

#### *In Focus: MCDC Mentoring Programme.*

- 28 mentees and mentors matched
- mentoring agreement formalizes the process
- frequency and mode of meetings decided between the mentor and mentee
- one face-to-face meeting per year encouraged
- web-based support and training materials developed and available as an open access resource at: <http://mentorship.mcdconsortium.org/mentoring>
- mentor training workshop jointly developed and delivered with the College of Medicine, Malawi

## 8 Capacity Strengthening

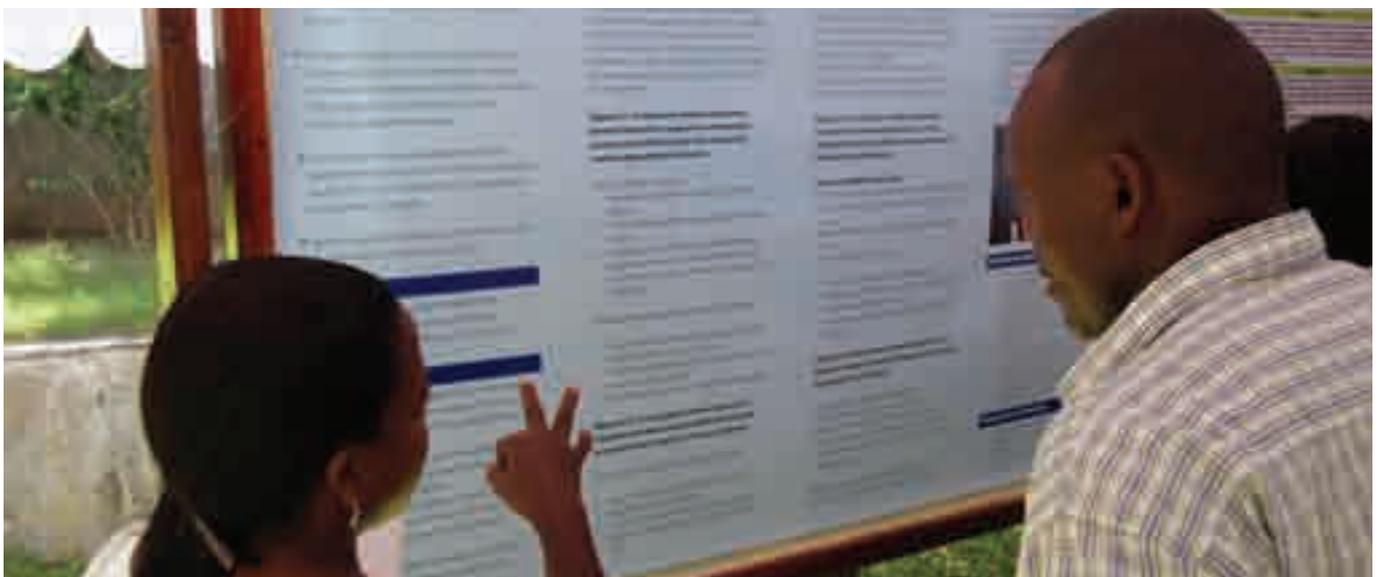
MCDC's approach to institutional capacity strengthening for its partner's PhD programmes has been based on meeting the needs for each partner as identified, in 2009, by a Baseline Needs Assessment exercise. Activities at each institution, tailored to address their specific needs include: the development of comprehensive, accessible, up-to-date regulations and handbooks, improved supervisor training and mentoring and a formal induction and research skills courses. A follow-up assessment is shortly to be undertaken to evaluate this aspect of the programme.

MCDC has, over the last two years, worked with its partners to facilitate PhD supervisor training courses at four of its African partner institutions and has recently developed a Training of Trainers course for PhD supervisors and a mentors training course in conjunction with the College of Medicine and The Malawi-Liverpool-Wellcome Trust Clinical Research Programme in Malawi. Over 100 staff have benefited from these training courses with attendees from

institutions outside the MCDC partnership including those from the Wellcome Trust's African Institutions Initiative (SACIDS, SNOWS, CARTA and (THRiVE).

### *Networks, consortia and multi-centre field trials.*

Staff and students from the Centre continue to play key roles in a number of malaria research consortia and multi-centre trials. Contributions to the work of MalariGEN are being made by members of the Centre working under the auspices of the Joint Malaria programme in North Eastern Tanzania. Growing interest in the development of strategies to control adult and larval stages of *Anopheles* mosquitoes (e.g. IVCC, PAMVREC) has led to the establishment of a number of field centres in West and East Africa where many of these studies are conducted. Work plans for projects conducted by these various consortia incorporate the transfer of skills and technology to local project staff with the appropriate training being delivered either in country, or, through scientific exchange visits to LSHTM.



MCDC Meeting Kilifi, Kenya, 2009.

A primary objective of the ACT consortium is to evaluate a range of strategies for the delivery of ACT, and to provide evidence which will maximise their public health impact. A core team of scientists, including Malaria Centre members, provide social science, economic, and statistical support to the consortium projects. Capacity in social science has been strengthened by Malaria Centre members who have supervised a team of junior scientists based at the Infectious Disease Research Collaboration in Uganda.

Malaria Centre members have played key roles in the Phase 3 trial of the RTS,S vaccine in Tanzania and Ghana, providing mentorship to the local Principal Investigators and supporting the significant infrastructure and training programmes that have provided field and laboratory staff with the necessary expertise to conduct such large scale, high qual-

ity vaccine studies. In a similar vein, staff have mentored project coordinators and assisted local staff to lead on large multi-centre trials investigating Seasonal Malaria Chemoprevention in Mali and Burkina Faso, and Intermittent Screening versus Treatment of Malaria in Pregnancy - in Burkina Faso, Mali, the Gambia and Ghana (MiP consortium).

The funding environment in which the Malaria Centre's capacity strengthening activities are conducted has changed significantly during the period covered by this report. Donors are now investing heavily in programmes which strengthen capacity in health systems in malaria endemic countries and one of the main challenges faced by the Malaria Centre is how to make the best use of its resources in meeting these changing needs.

### *In Focus: Understanding what National Malaria Programmes mean when they talk about operational research.*

Operational and Implementation Research have received increased attention in recent years. Large donors, such as the Global Fund to fight HIV/AIDS, tuberculosis, and malaria have prioritised Operational Research (OR) as an activity that needs to be undertaken to improve programme quality and effectiveness. Despite donor support for OR for malaria programmes, emphasis has been on providing research outputs which inform global malaria policies such as Artemisinin-based Combination Therapy efficacy or effectiveness of different Rapid Diagnostic Tests rather than local, programme-based OR to provide evidence for taking programmes to scale.

Members of the Malaria Centre (Caroline Lynch & Kirstin Banek) are helping to identify how different groups involved in the conduct, management and funding of research define operational and implementation research. In addition they are seeking to understand which groups prioritize OR and whether, and at what programmatic levels, OR results are used.