Mid-term evaluation report

NACCAP programmes first call

APRIORI

The construction site of the Kilimanjaro Clinical Research Centre at the foot of Mount Kilimanjaro

The Hague, April 2009
Revised 30 June 2009

Foreword

In 2004, the Dutch Ministry of Foreign Affairs (DGIS) made available € 20 M to contribute to EDCTP through the Netherland African Partnership for Capacity Development and Clinical Interventions against Poverty related Diseases (NACCAP) programme. The general aim of NACCAP is to support investment in strengthened research and development capacity of multiple locally owned and controlled health research centres in sub-Saharan Africa, capable of clinical testing of new interventions against poverty related diseases and contributing to the EDCTP objectives.

In October 2006, the third partnership programme of the first NACCAP call, APRIORI, started, with funding for an initial two years. Funding could continue up to 2010 if the results of a mid-term review (MTR) to assess if the partnership programme is indeed contributing to the objectives of NACCAP were favourable. In January 2009, a MTR of APRIORI was executed by NACCAP and the results of the review are presented in this report.

The MTR-committee was composed of one member with expertise in the field of project management in health research and policy support (Dr Claudia Hanson), one member with expertise in the field of capacity strengthening of African research institutes (Dr Andrew Kitua); one member of the NACCAP programme committee with expertise on translating research into health policy (Dr Irene Agyepong) as chair; and two members of the NACCAP secretariat (Dr Judith de Kroon & Dr Eva Rijkers) for administrative support. A written mid-term review report of APRIORI was assessed, and a site visit was paid to Tanzania.

The MTR committee observed that the potential for KCMC to become an excellent research centre is high and that by strengthening a research coordinating structure (KCRC) for KCMC, APRIORI is contributing to KCMC to become a Centre of Excellence. However, APRIORI faces large challenges in ensuring that the objectives will be achieved in a sustainable way if APRIORI continues its current approach up to 2010. These challenges include managerial and strategic weaknesses and lack of sufficient collaboration with stakeholders including ministries, national health programmes and national and international research partners, who are essential for the long-term development of sustainable national research capacity and effective utilization of research for development,.
These challenges are not insurmountable such that the programme needs to be terminated, but the MTR committee concludes that these challenges do however need to be addressed quickly and completely, if necessary with expertise from outside the partnership programme. The MTR committee therefore recommends that the programme is funded up to 2010, but this recommendation is made only on the strict condition that the partnership programme convincingly addresses the weaknesses described in this report before 1 October 2009.

The MTR committee recommends NACCAP to closely monitor APRIORI's progress over the coming 6 months.

Last, but not least, the MTR committee wishes to express its appreciation to the APRIORI team for their hospitality, welcome, cooperation and open discussions and interactions with the committee. Without the efforts they put into facilitating the MTR, it would not have been possible to achieve so much in such a short time. The MTR committee commends the team for the work already done, and looks forward to seeing fast growing and improving international standard health research and development of capacity and sustainable establishment of KCMC as a Centre of Excellence.

Yours sincerely,

Irene Agyepong,
Chair of the MTR committee

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PART A: GENERAL INTRODUCTION

1. Background information: EDCTP

In 2002, the Member States (MS) of the European Union, Norway and the Developing Countries (DCs), particularly sub-Saharan Africa, came together to establish a sustained partnership to reinforce research into the development of new clinical interventions to fight HIV/AIDS, malaria and tuberculosis. This resulted in 2004 in the European & Developing Countries Clinical Trial Partnership (EDCTP), the first programme financed by the instrument of Article 169 of the 6th Framework Programme of the European Commission. The mission of EDCTP is to accelerate the development of new clinical interventions to fight HIV/AIDS, malaria and tuberculosis in, particularly, sub-Saharan Africa and to improve generally the quality of research in relation to these diseases. The main objective of EDCTP is to contribute to the integration of European research in these fields. Within its mission, EDCTP aims at the establishment of a sustained research partnership between Europe and DCs in the fight against the three diseases.

In 2004, the Dutch Ministry of Foreign Affairs (DGIS) made available € 20 M to contribute to EDCTP. Because at that time the implementation strategy of EDCTP was not clear, the Dutch ministry decided to contribute to EDCTP through the NACCAP programme; the Netherlands-African partnership on Capacity strengthening and Clinical trials against Poverty-related diseases; a research and capacity strengthening programme managed by NWO/WOTRO.

2. Background information: NACCAP

The general aim of NACCAP is to provide an impulse to the investment in, and development of, **African owned** and controlled health research centres aimed at and **capable of clinical testing** of new interventions against poverty related diseases. As a result, the position and contribution of African institutes in EDCTP will be strengthened, supporting **partnerships** in **joint R&D** activities to fight poverty related diseases in Africa. NACCAP aims at **transferring responsibilities** for sustained developments to the supported African centres: for this, the centres (2-5) strengthened should become **part of an African Network of R&D centres** capable of **collaborating with EDCTP** in clinical trials.

In 2004 EDCTP took off as a research-funding organisation that awarded separate, small grants, focussing on collaborative EU-African research rather than on capacity strengthening[1]. However, the NACCAP Steering Committee (SC) thought this was not the optimal way to achieve the objectives and therefore decided to announce a call for proposals on its own, with the aim to fund African-Dutch partnerships consisting of integrated multidisciplinary R&D projects which contribute to institutional capacity development of African research centres. In addition, because NACCAP aims at strengthening centres that can collaborate with EDCTP in clinical trials, preferably the awarded partnerships included researchers from other European countries (N-N networking).

3. Goal of the midterm review

As a result of this first call, three partnership programmes (INTERACT, CoMMAL, APRIORI) were selected for funding for 2,5 year and funding will continue up to august 2009-2010 on the condition that the results of a mid-term review are favourable.
Two of the partnership programmes, INTERACT and CoMMAL started December 2005 and have been reviewed in June 2008. The third one, APRIORI, started in October 2006 and was therefore reviewed in January 2009.

The **goal** of the mid-term review is to assess if the partnership programmes are indeed contributing to the objectives of NACCAP and specifically to the objective of the first NACCAP call, i.e:

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[1] During the course of 2005 the interpretation of article 169 was further developed and in 2006 EDCTP changed its strategy into a strategy more in line with the NACCAP approach.

- Strengthened research & development capacity of multiple, locally-owned health research centres in Sub-Saharan Africa contributing to the EDCTP objectives.

Since the funded partnership proposals were selected on the basis of the quality of capacity strengthening, scientific quality and governance (including equality of the partnership and African ownership), progress with regard to these aspects are specifically being reviewed.

4. Methodology of the Mid Term Review

For the mid term review, a specific Mid Term Review (MTR) committee was composed, consisting of two experts, one in the field of project management in health research and policy support and one in the field of capacity strengthening of African research institutes. The MTR committee is chaired by an expert on translating research into health policy, and assisted by the NACCAP secretariat.

Composition of the MTR committee:

Chair:	Dr Irene Agyepong, NACCAP Programme Committee, Director Ghana Health Service Greater Accra Regional Health Directorate, Accra, Ghana;
Members:	Dr Andrew Kitua, Director General, National Institute for Medical Research, Dar es Salaam, Tanzania;
	Dr Claudia Hanson, Unit Project Management, Institute for Tropical Medicine Antwerpen (ITM), Belgium;
Secretariat:	Dr Judith de Kroon & Dr Eva Rijkers, NACCAP secretariat, NWO/WOTRO

Tasks of the MTR committee:

The tasks of the MTR committee are:

Prepare MTR:

1. Take note of the background documents:
   - original NACCAP background document;
   - first call text;
   - the original partnership proposals;
   - site assessments (before start of the partnership programmes) reports;
   - annual reports of the partnership programmes 2006 and 2007;
   - overview of the NACCAP comments on the annual reports;
   - MTR form, including testable goals;
   - preliminary SWOT (by NACCAP).
2. If necessary, adjust testable goals that will also serve as the programme outlines for presentations to be held by partnerships;
3. Discuss testable goals with programme co-ordinators of partnership programmes;
4. If necessary, adjust testable goals and ask programme co-ordinators to complete the MTR form;
5. Formulate specific review questions;
6. Propose a list of participants / stakeholders whom the MTR committee would like to interview during the site-visit;

Visit the partnership programmes:

7. Take note of the MTR testable goals form, completed by the co-ordinators of the partnership programmes and formulate review questions;
8. Visit the partnership programme sites in Africa and meet with the main African participants of the partnership programmes. For this a meeting will be organised by the partnerships;
9. Interview individuals (programme participants, other stakeholders) to answer specific questions of the committee;

Contribute to the report:

10. Write a report and formulate conclusions, including recommendations for improvements/ future activities;
11. Discuss the report with the coordinators of the partnership programmes for comments and if relevant, adjust the report accordingly;

12 Present the (adjusted) report to the NACCAP Programme Committee.

Based on the report, the NACCAP Programme Committee will formulate recommendations with regard to improvements to be made and continuation of funding to the NACCAP Steering Committee who will decide.

5. Contents of the report

The reportage of the MTR of APRIORI (Part B) is included in this report and is composed as follows: **Chapter 1** of the reportage includes a short summary of the conclusions and recommendations of the MTR committee. In **chapter 2**, a short description of the partnership programme and the environment in which it operates is described, followed by **chapter 3** that provides the results of the site MTR including the progress of the partnership programme. For this, the testable goals are taken as a lead. Progress with regard to each testable goal is followed by a preliminary conclusion of the MTR committee and the MTR committee's recommendations. **Chapter 4** includes some bottlenecks for the future identified by the partnership programme. Furthermore, the annexes provide some detailed information on the partnership site visit programmes (annex 1), the composition of the APRIORI Steering Committee (annex 2), APRIORI SWOT analysis (annex 3) and abbreviations used (annex 4). Annex 5 contains the action plan drafted by APRIORI in response to this mid-term evaluation report.

PART B: APRIORI

Reportage of the MTR of the African Poverty Related Infection Oriented Research Initiative (APRIORI)

1. Summary

APRIORI is a research and capacity strengthening programme focussing on malaria, tuberculosis and HIV/TB co-infections. Within APRIORI, Tanzanian, Malian, Ethiopian and European (mainly Dutch) partners work together. For the Tanzanian partners, the Tanzanian Kilimanjaro Christian Medical Centre (KCMC), KCM College of Tumaini University, Kibong'oto National TB Referral Hospital as well as several other peripheral public health sites are involved in the programme. Together, the partners are building the Kilimanjaro Clinical Research Centre (KCRC[2]) that is intended to become a coordinating structure for clinical research embedded in KCMC and contribute to KCMC's goal to become a centre of excellence in research able to carry out clinical trials for vaccines and drugs.

KCMC is a strong tertiary referral hospital that aims to provide not only high-quality care, but also to provide high-level education and execute high-level research. To this extent, KCMC collaborates with Tumaini University to ensure excellent teaching through KCM College. In addition, several independent, international research initiatives are working within KCMC and share the use of KCMC's Biotechnology lab (BTL). Thus, the linkages of KCMC with care facilities, higher education and international research groups are favourable to establish KCMC as a local Centre of Excellence. However, at the moment no overall coordinating research structure is in place. To bring KCMC's research to a higher level, APRIORI aims to set up the Kilimanjaro Clinical Research Centre (KCRC). KCRC is previewed to coordinate all clinical research activities within KCMC and to develop a common research strategy for KCMC.

Scientifically, the APRIORI programme focuses on clinical studies for TB and malaria vaccine development, and for TB and TB/HIV co-infection treatment strategies. Thus, the scientific focus of the programme is relevant. The malaria project (project 1) is up and running. It has identified and is establishing several interesting field sites and has made satisfactory progress. However, although a role for MRTC (Mali) was foreseen in the original APRIORI proposal in capacity building for the malaria vaccine trials, it is unclear what the actual role of MRTC has been during the preparation phase for the trials. The TB vaccination project (project 2) has been delayed by internal issues at the collaborating Ethiopian institute and the project has not started yet. The TB treatment studies (projects 3 (treatment TB/HIV) and 4 (shortening TB treatment)) suffered from delays caused by organizational and regulatory issues. Project 3 recently has started enrolling patients. However, project 4 is still waiting for clearance to import the trial drugs, which means a delay of more than one year. In summary, projects 1 and 3 are currently progressing well but with some delays. Progress of project 2 and 4 is worrisome. The projects are operating rather autonomously and in general integration between the projects is low. Although described in the awarded APRIORI application, behavioural research is absent and the multidisciplinary approach of APRIORI is rather limited to (bio-)medical sciences.

APRIORI has contributed to individual capacity building of APRIORI researchers by training and courses. Regarding institutional capacity building, APRIORI has contributed to several courses of the KCM College, most notably the MSc course in Clinical Research, and is still involved in improving these courses. In addition, a building is being built which will provide KCMC with a centralised place for research. However, other institutional capacity strengthening is rather weak. Although KCRC is expected to coordinate clinical research activities of KCMC, no short-, medium- or long-term scientific plans and strategic vision seem to be in place. In addition, no plans to attract core funding are available, (financial) management appears to be weak with no plan to retain the trained staff and no

[2] In May 2009, the Kilimanjaro Clinical Research Centre (KCRC) was renamed Kilimanjaro Clinical Research Institute (KCRI).

strategy for short-, medium- and long-term sustainability of KCRC. Currently, only research grants carry KCRC.
The lack of a strong coordinating role of KCRC is reflected in the reporting of APRIORI (in the only annual report received as well as from the MTR assessment form filled in by APRIORI and during the MTR visit): reports are often unclear and figures differ between different reports and even within the same report. Communication between APRIORI partners is weak (as shown by the unawareness of KCRC of the ToR for this MTR, two months after it was made available to the (Dutch) coordinator of APRIORI). These examples all indicate a lack of central management, strategic planning and oversight of KCRC and within APRIORI.

In addition, financial management is weak and not always transparent as shown for example by late piecemeal budget transfers that lacked mentioning which transfer was meant for what activity/ project and that were transferred to the PRIOR account instead of the APRIORI account. APRIORI already recognised this issue and has started implementing a more central (KCMC) financial management structure. As a result, many constraints hindering financial management seem to have been lifted in recent months, but capacity strengthening of financial skills is needed to continue progress.
A strong (strategic, administrative and financial) management structure is even more important now that a large number of grants have been awarded to KCMC, building on APRIORI. Although this attraction of external grants clearly indicates the grant writing capabilities of the staff, an overload of grants combined with weak financial management skills might pose the threat that KCRC will not be able to manifest itself as a credible and reliable partner.

As the MTR committee observed significant weaknesses in coordination and management which poses a threat to reaching the overall goal of establishing a well functioning research centre of excellence, the MTR committee recommends to put an action plan in place to address these challenges in the coming months.

To address these issues, the MTR committee advises the Dutch partner, who was chosen by the partnership to coordinate APRIORI, to improve their mentorship role towards KCRC management. The Tanzanian partner, KCRC, is also advised to prioritize research leadership and management capacity strengthening. Only when KCRC has excellent management structures in place it will be able to contribute to developing KCMC into a sustainable research Centre of Excellence which is capable of collaborating with international partners according to international acknowledged (management) standards. The current pace of progress will not suffice for KCRC to be able of managing a research centre after the completion of APRIORI. Therefore, rapid progress should be made and all partners should be fully committed to this goal.

Furthermore, environmental capacity strengthening is weak: although the Ministry of Health is linked to KCMC through the GSF, ministries, national health programmes or other relevant stakeholders seem not to be actively involved in the development of the (scientific and capacity strengthening) policy and implementation of APRIORI and APRIORI's results. For example, the Kibong'oto site visited seemed not to be very well informed on APRIORI and its objectives. The MTR committee therefore encourages APRIORI to improve the relationships with the stakeholders at sites by including their directors within the governing bodies of APRIORI (where relevant) **and** by actively and bi-directionally communicating with them on the state of the art of APRIORI and its overall goal and on the long-term goals of KCRC.
In addition, no non-Nijmegen European partners seem to be actively involved in the (management) of APRIORI and although KCMC has been awarded with international research grants, building on APRIORI, other (non-Dutch) European partners are hardly visible. Therefore, although strong on paper (including involvement in publications of project 1), embedding of KCRC by APRIORI into international networks seems to be rather weak in reality (as observed in practice /on the ground during the MTR).

In conclusion, the MTR committee thinks that the potential for KCMC to become a Centre of Excellence is high because of the close links between high quality medical care, public health programmes and higher education in a densely populated area where malaria and TB are endemic. However, KCMC has

just started to execute not only relatively small but also big research programmes. This expansion demands a coordinated approach and strong (financial) management. This aspect is still underdeveloped and threatens the contribution of KCRC to KCMC in becoming a successful and sustainable Centre of Excellence.
The MTR committee therefore advises APRIORI to reflect on its management structure, including (non-scientific) stakeholders and to define together a clear strategy on the establishment of a sustainable research coordinating structure (KCRC) with clear responsibilities for each partner, timelines, targets and indicators and regular reviews and communication strategies. The MTR committee recommends NACCAP to closely monitor APRIORI's progress over the coming 6 months.

2. The partnership programme

Description of the partnership programme

APRIORI is a research and capacity strengthening programme focussing on malaria, tuberculosis and HIV/ TB co-infections. Within APRIORI, Tanzanian, Malian, Ethiopian and European (mainly Dutch) partners work together. The main partners include the Kilimanjaro Christian Medical Centre (KCMC) in Tanzania and the Radboud University Nijmegen. Other African partners include Malaria Research and Training Centre (MRTC, Mali) and Armauer Hansen Research Institute (AHRI, Ethiopia).
KCMC and Radboud University Nijmegen (RUN) have been working together for the past 15 years. Before the awarding of the APRIORI proposal, KCMC and RUN already closely cooperated in the PRIOR programme, which allowed for local questions-driven research into poverty-related diseases.
Within APRIORI, the partners are setting up the Kilimanjaro Clinical Research Centre (KCRC). KCRC is intended to coordinate clinical research of KCMC and develop a common research strategy for KCMC, thus adding to KCMC to become an excellent research centre, able to carry out clinical trials on vaccines and drugs and to have the expertise to implement new treatment strategies in the community. Within KCRC, multidisciplinary research will be conducted on prevention, control and treatment of malaria, tuberculosis and HIV/ Aids.

The APRIORI programme includes multi-disciplinary translational research for malaria, tuberculosis and TB/ HIV with emphasis on clinical trials conducted by African staff. APRIORI originally planned for activities to be conducted in each segment of the translational research pathway towards implementation: testing novel tools (for candidate malaria and TB vaccines), optimization (of current treatment protocols for TB with or without HIV co-infection) and implementation (public health and behavioural studies on adherence and perception of drugs/ vaccines to improve compliance).

APRIORI consists of 5 projects:
Project 0: capacity building to establish KCRC
Project 1: Phase I and II testing of malaria vaccines
Project 2: Capacity building and establishment of clinical trial centre sites for testing new TB vaccines (Phase I/ IIa)
Project 3: Concurrent treatment in TB and HIV co-infection
Project 4: Development of drug regimens to shorten treatment for tuberculosis

Project 0, the establishment of the KCRC, is aimed at capacity building and is the basis of the other four projects. Project 0 includes building of the physical infrastructure of KCRC, as well as building managerial (financial, administrative, communicative) structures of KCRC which should become the coordinating structure for clinical research within KCMC. The projects 1 through 4 are research projects aimed at performing clinical trails and building (individual) capacity while doing so. Project 2 only entails capacity building for TB vaccine trials while the actual trials are planned to be performed beyond APRIORI. The original proposal mentioned two subprojects within project 4: HIGHRIF and RIFMOX.
Within the four research projects, the aims of APRIORI with regard to testing novel tools and optimisation of treatment are clear. However, the activities planned with regard to implementation (public health and behavioural studies) are less prominent.
For research activities, several partners and trial sites have been mentioned in the original APRIORI proposal. An important Tanzanian partner of APRIORI is Kibong'oto National TB Referral Hospital, which is also trial site for project 3. Other trial sites within the APRIORI programme include the Mererani Tanzanite mining site, the Same field site, the Lower Moshi field site, the Rift Valley field sites (where the new malaria REDHOT and REDMAC studies will be executed, these include Mto wa Mbu, Magugu and Babati), and some others, including Hale, where PRIOR has built a dispensary.

The main applicant of the proposal is Dr A. van der Ven (University Medical Centre St. Radboud, Nijmegen, the Netherlands), who also acts as coordinator of APRIORI. Main African partners in the partnership are Prof. J. Shao (Executive Director, KCMC, Tanzania) and Prof. F. Mosha (Director KCRC,

Tanzania). South-South collaboration within APRIORI includes the African collaborators Prof. O. Doumbo (MRTC, Mali) and Prof. H. Engers (AHRI, Ethiopia).
Some of the European partners presented in the original APRIORI proposal include Prof. T. Ottenhoff (TB research, Leiden University Medical Centre), Prof. R. Sauerwein (malaria research, Radboud University Medical Centre) and Prof. H. Hospers (behavioural research, Maastricht University). From other European countries Prof. E. Riley (London School of Hygiene and Tropical Medicine) and Dr P. Andersen (Statens Serum Institute, Denmark) participate in APRIORI.
The original programme consisted of more projects with a proposed subsidy period of 60 months (1 January 2006 – 31 December 2010). This proposal was adjusted in a more dense programme with less projects and a shorter subsidy period of 48 months (1 September 2006 – 31 August 2010). The adjusted proposal was awarded with € 2.1 M.

Environment

Organisational environment

KCMC is a tertiary referral hospital for Northern Tanzania, with a catchments area of approximately 15 million people. KCMC was established in 1971 by the Good Samaritan Foundation (GSF, an alliance of the Lutheran Church in Tanganyika, the Anglican and Moravian Churches). It occupies a large site about 8 km north of Moshi town centre, where it handles 800 outpatients and nearly 550 inpatients daily. Through a Memorandum of Understanding between the government of Tanzania and the GSF, KCMC obtains part of their recurrent cost budget (staff salaries, hospital running costs, equipment and drugs) from the government through the Ministry of Health (MoH). The MoH, as well as regional health services, are represented in the KCMC Governing Board.

KCMC aims to provide not only high-quality care, but also provides high-quality education and implements high-level research. Therefore, KCMC collaborates with Tumaini University to provide excellent education to medical, nursing and allied health professional students through Kilimanjaro Christian Medical College. KCM College of Tumaini University was established in 1997. It is incorporated into KCMC and offers education at several levels: MSc, BSc and Diploma. For example, KCM College offers MD, Master of Medicine, and MPH training. In addition, KCM College offers several MSc courses, such as Anatomy, Biochemistry and Embryology.

With regard to research, several independent research initiatives (projects) are working with KCMC. For example, the Joint Malaria Programme (JMP) is a cooperation of NIMR (Tanzania), KCMC, London School of Hygiene and Tropical Medicine (LSHTM), and Copenhagen University. Activities within JMP at KCMC are carried out in the Biotechnology Lab (BTL). Several other (externally-funded) research projects are ongoing within KCMC as well. KCMC aims at coordinating these research activities by setting up a central structure (KCRC) and as such to bring KCMC's research to a higher level. APRIORI is expected to strengthen KCRC.

An important partner of any TB research in northern Tanzania is Kibong'oto, the national referral hospital for TB. This hospital is part of the national TB programme. Kibong'oto occupies a large site and offers beds for approximately 300 inpatients. Currently, a new facility is being built at the site, intended as treatment ward for patients infected with multidrug resistant TB.
A formal MOU exists between Kibong'oto and KCMC and both hospitals have a long-standing collaboration regarding TB care: Kibong'oto has been admitting TB patients referred from KCMC for more than three decades, and physicians from KCMC have been providing consultant services in difficult TB cases. Difficult cases other than TB have been referred to KCMC from Kibong'oto. The collaboration between KCMC and Kibong'oto also involves research, which has mainly been focussed around clinical trials for TB treatment, also in collaboration with the University College London (Royal Free Hospital). Kibong'oto has also been used as field site for several joint training programmes of KCMC in collaboration with the Royal Free Hospital. A site assessment executed before the start of APRIORI by Family Health International noted several communication problems between KCMC and Kibong'oto.

Kibong'oto hospital and staff

KCMC has contacts with other Tanzanian health research institutes and universities such as Muhimbili University of Health and Allied Sciences (MUHAS), Ifakara Health Institute (IHI), and Mbeya Medical Research Programme (MMRP).

The presentations for the MTR and the interviews took place in different buildings at the site of KCMC (for the MTR programme and interviewed individuals, please see Annex 1). KCMC is well housed and equipped including research laboratory facilities (such as BTL), but facilities are overcrowded. The APRIORI programme uses these facilities until a new KCRC building is finished.

The BioTechnology Lab

3. **Progress**

- **Testable goals**

In order to measure progress, several testable goals and related review questions were formulated by the MTR committee and approved of by APRIORI. In summary, the testable goals are:

- Relevance (with regard to individual, institutional and environmental capacity strengthening, and with regard to science);
- Governance (contributing to equal partnership and/or African ownership and embedding while safeguarding transparency and accountability);
- Efficiency (is progress on schedule);
- Effectiveness

In addition, some challenges for the future of APRIORI were identified.

- **Results**

1. **Relevance**

a) contributing to strengthened research & development capacity of a locally-owned health research centre in Sub-Saharan Africa.

APRIORI aims at strengthening R&D capacity of KCMC through supporting the establishment of the Kilimanjaro Clinical Research Centre (KCRC). APRIORI aims at strengthening capacity at an individual level as well as at institutional level.

Individual level

APRIORI has facilitated and sponsored both short term and long term training of KCRC staff. All staff who joined the program in 2006/2007 received training in GLP/ GCP.
In 2007, three short courses were organised by PRIOR and APRIORI: GCP, parasitology, and research methodology (statistics and epidemiology). An overview of all training provided through APRIORI is shown in table 1:

Table 1. Overview of training provided through APRIORI

Course	**Period**	**Location**	**Facilitated by**	**Participants**
GCP/ GLP	March 2007 (5 days)	Moshi, Tanzania	KCRC Radboud University AHRI (Ethiopia) KEMRI (Kenya)	20 trainees: 16 KCRC 3 Kibong'oto 1 KCMC
Parasitology	May 2007 (6 days)	Moshi, Tanzania	Lab Enschede (NL)	KCRC and KCMC laboratory staff
Research methodology (epidemiology/ biostatistics)	November 2007 (12 days)	Moshi, Tanzania	Radboud University KCRC/ KCMC	8 KCRC staff 7 MSc students Clinical Research 12 KCM College staff 1 Kibong'oto staff
Teaching methodology	July 2008	Moshi, Tanzania	KCRC Radboud University	20 lecturers of the MSc Clinical Research and MPH programmes
PhD training		3 PhD Tanzania, 1 NL		4 African APRIORI PhD students
Postdoctoral training				4 African APRIORI postdocs
Laboratory techniques				Dr G. Kibiki
Grant writing skills		Dar es Salaam Tanzania	USAID	Dr J. Chilongola
Research methodology		Witwatersrand University (South Africa)	Witwatersrand University (South Africa)	Dr J. Chilongola
MSc Clinical Research	Started 2007 (6	KCM College		12 MSc students (2 Kibong'oto, 2

	students) and 2008 (6 students)			Mali, 3 Ethiopia, 5 KCMC, 2 non-APRIORI-sponsored)
BSc lab technology				1 BSc student
Use Pastel software				Accountant
Data management		AHRI, Ethiopia	AHRI, Ethiopia	Junior data manager

The courses were closed by exams and the trainees now use their acquired knowledge and skills in practice. In total, 15 students (14 MSc and 1 BSc), 4 PhD's, 4 post-docs and managerial staff and 3 technicians have been trained by APRIORI.

Institutional level

KCMC aims to coordinate the different independently operating research projects currently being implemented at KCMC in a central structure in order to bring KCMC's research to a higher level. Therefore, KCRC is being established to develop a common research strategy for KCMC, to coordinate KCMC's research activities and to carry out drug trials and implement the findings. KCRC is expected to grow to become the main hub for research in KCMC and is expected to contribute to the building of a strong research arm of KCMC.

APRIORI contributes to building KCRC as a central research structure within KCMC; a physical building is currently being finalised (up till now, ground and first floor are 95% completed). The NACCAP contribution to APRIORI was budgeted to suffice for the whole building. Due to several delays and rising building costs, funding from other sources had to be sought to be able to finish and furnish the KCRC building. Additional VITA (EDCTP/ NACCAP co-funding) and PANACEA (EDCTP) funds will be used to finalise the KCRC building including furniture and equipment. Most lab facilities, computers and internet facilities (up to 90%) are now being procured and the remaining are expected to be in place as soon as the building is occupied (expected for March 2009). In addition, a second floor is currently being added which will be used to accommodate post-docs and PhD students and room for a library.
The table below indicates how funding is being provided:

Funding KCRC building	Building	Furniture/ equipment
Ground floor	NACCAP	PANACEA
First floor	EDCTP – VITA	PANACEA
Second floor	EDCTP – EACRR	PANACEA

Human resources required for the functioning of KCRC has been employed and trained. 22 Out of 24 foreseen staff has been employed, including a Director (Prof. F. Mosha) who is responsible for daily KCRC management, and Dr J. Chilongola, an APRIORI SC member, who has been appointed as Head of the Training Department of KCRC. He is responsible amongst others for identifying training opportunities for researchers and developing a training schedule. Due to lack of space and minimal need during the start-up phase, two key positions in the APRIORI programme have not been filled yet: administrative manager and senior data manager at KCRC. The administrative manager is expected to also serve as Deputy Director of KCRC. With the expected completion of the KCRC building in March 2009, these positions can now be filled. In the meantime, the junior data manager has been trained extensively, a.o. by following an intensive course in data management in Ethiopia.
All staff hired at the start of KCRC has been trained in GCP and GLP. In collaboration with MRTC (Mali), two clinical research teams have been established.
Through KCMC, KCRC has access to the well-organised Tanzanian ethical review system. In addition, KCMC will apply for free access to literature databases, which will benefit KCRC research, but broadband internet is not available yet.
These capacity strengthening activities have led to an upgrade in the level of KCMC's clinical trial capacity, which at the moment is as indicated in table 1. APRIORI expects that in view of the current training trend, and with the completion of the KCRC building in March 2009, the partnership programme will be able to move to level 4 by the end of this year.

Table 2: Level of Partnership programme at this moment: level at the review moment is printed **bold**				
Level	***1***	***2***	***3***	***4***
Components	*Epidemiological relevant population and interested investigators*	*Identified cohort and follow-up capability*	*Sites with some clinical trial capacity (indicate phase)*	*Fully capable site for phase I-III trials*
1. Investigators	Lacks GCP	GCP exposure	GCP qualified with limited experience	**GCP qualified with experience**
2. Subjects	**Target population identified**	**Demonstrated ability to follow-u Community involvement**	**Demonstrated abilit to follow-up. Community involvement formali**	**Demonstrated ability to follow-up. Community development Programme**
3. Ethics	IRB not yet established	**IRB National ethics Committee exists**	**IRB National guidelines for clinical trials exi**	**IRB National guidelines for clinical trials exist**
4. Laboratories	Access to laboratory facilities	GLP exposure	**GLP qualified with limited experience**	**GLP qualified with Experience**
5. Clinical facilities	Ability to measure clinical outcomes	**Access to facilities with staf**	Adequate facilities and qualified staff	Excellent facilities with qualified staff
6. Data manage-ment	Data collection field staff	**Some computer infrastructure and basic data-processing skills**	Sufficient computer hardware and softwar Experienced data-processing staff.	Biostatistics, sufficient computer hardware and software. Experienced data-processing staff
7. Sample repository	absent	Some, but temporary/ sporadic	**Part of laboratory**	Available (cold) chain
8. IPR skills	absent	**External qualified advisor available**	Some internal qualified skills available	Experienced qualified personnel available within centre
9. Administration	Basic administrative capability	Basic administrative Capability	**Accounting and administrative systems available**	Well established and audited accounting and admin systems

GCP/GLP*= Good Clinical Practice/Good Laboratory Practice; international quality standards for clinical/laboratory practice.*
IRB*= Ethical review Board; independent committee of (local) stakeholders and experts who review proposed work plans for ethical implications and whose approval is required prior to start*

Regarding administration (item 9), the MTR committee thinks that although accounting and administrative systems are indeed available and running within KCMC, for APRIORI, including KCRC, accounting and administrative systems seem to be operating weakly and fairly autonomously from KCMC (see Governance).

Staff turnover
Two out of 24 staff left the programme because of further training or a higher incentive package, whereas two new staff have been appointed. KCRC fears that more adequately trained staff will leave the institute, because of several bottlenecks for the long-term career of researchers at KCMC. According to APRIORI, these include:

- lack of clear structure for career development;
- lack of clear defined training opportunities;
- lack of staff motivation;
- weak working environment: office space and facilities;
- inadequate financial administration.

APRIORI has formulated and implemented strategies to address these bottlenecks, including:

- 15/24 KCRC staff have been given a permanent position within either KCMC or KCM College;
- the training unit of KCRC will develop a training schedule for researchers and identify training opportunities;
- there are plans to develop a personal development programme (PDP) at KCRC;
- office space and facilities will be provided upon the completion of the KCRC building;
- training on use of adequate financial management software was provided (see Individual Capacity Building) and a senior administrator with strong financial management skills will be recruited shortly.

Although these efforts are laudable, the MTR committee advises KCRC to define and implement a clear and adequate overall strategy to retain trained staff.

Environmental level

APRIORI contributes in different ways to capacity strengthening at the environmental level:

The educational environment at KCRC has been improved. APRIORI contributed to establishing an MSc course in Clinical Research at KCM College by assisting in curriculum development and module books preparation. The MSc program suffered from delays, caused by the late appointment of the senior epidemiologist instrumental in developing the MSc program, but it is now up and running. In addition, APRIORI contributed to the MPH and MMed courses of KCM College. APRIORI is still involved in optimising the MSc programmes. These training activities enhance the attractiveness of KCRC for students from other countries in Africa. For example, MRTC (Mali) indicated that although there is plenty of practical experience in Mali, training opportunities are limited and Malian students regularly go to the USA for their studies. Instead, they now have the option to stay in Africa for their training and two Malian students are currently taking the MSc course at KCMC. This is perceived as a highly positive development.

With regard to the international scientific environment, APRIORI's project 1 participates in the Joint Malaria Program, together with KCMC, NIMR, LSHTM and Copenhagen University. Quarterly meetings for project leaders and annual meetings for institutional heads are organised, enabling scientific discussions and exchange of best practices. As such, APRIORI is embedded within an international research environment. However, the European collaboration seems to be restricted to (this) project level only and no strategic and more sustainable collaboration between APRIORI and European partners seems to be in place. By establishing KCRC as a coordinating structure, KCRC has a chance to formalise such international embedding of KCMC.
In addition, APRIORI has been successful in attracting new grants using linkages with other institutes and networks: 10 externally-funded research projects have started since the start-up of APRIORI in which KCRC participates. These programmes seem to be mostly the result of collaboration between KCRC and Nijmegen as they mainly include the same African and European partners in different setups. Three projects involve only KCRC or Radboud University staff. Table 3 summarizes these new grants.

Table 3: New grants attracted by APRIORI

Programme	**Sponsor**	**Amount received by KCRC**	**Collaborators**	**PIs**	**Supported activities**
VITA	EDCTP NACCAP	€ 495,524 € 200,000	Zambia – University Teaching Hospital NL – national TB referral hospital NL - Radboud University UK – MRC	E. Kisanga D. Burger	- ARV drug trials - KCRC infrastructure
AFRO-IMUNOASSAY Network	AMANET	€ 50,000	Plasma samples from Burkina Faso, Gabon, Ghana, Senegal, Zimbabwe, Tanzania NL – Radboud University	J. Chilongola T. Bousema	- Clinical malaria immunology research - 2 MSc and 1

					PhD student
MALACTRES	EU	€ 29.900	Nigeria – University of Benin Burkina Faso – Centre Muraz NL – Radboud University NL – KIT Belgium – ITM UK – LSHTM London	S. Shekalaghe T. Bousema	- Malaria clinical trials (TRANSACT study)
REDHOT	BMGF	USD 100,000	Mali – MRTC NL – Radboud University NL – Wageningen University	S. Shekalaghe T. Bousema	- Malaria transmission hotspots research
MCDC	Wellcome Trust	No information received from APRIORI	Malawi – College of Medicine Uganda – Makerere University Senegal – University of Dakar Ghana – Kumasi University UK – LSHTM London UK – LSTM Liverpool Denmark – Copenhagen University	G. Kibiki B. Greenwood	- capacity building: 4 years, 20 PhD students - malaria research
PanACEA/ HIGHRIF	EDCTP	€ 9.7 M	South Africa – University of Cape Town/ University of Stellenbosch/ Aurum Institute Uganda – Makerere University Tanzania – Ifakara, Bagamoyo NL – Radboud University	G. Kibiki M. Boeree	- TB treatment shortening clinical trials (support APRIORI phase IIa)
EACCR	EDCTP WOTRO	€ 2500 € 1000	Africa: 8 institutes in Uganda, Kenya, Tanzania, Ethiopia, Sudan NL – Radboud University UK – LSHTM London	P. Kaleebu G. Kibiki	- Clinical research and capacity building: HIV, malaria, TB
DIA TUB	UNESCO	€ 27,100	No information received from APRIORI	A. Tostmann	- Clinical research diabetes & TB
RAPID	EDCTP (?)	Still unknown to APRIORI	Univ. Groningen	G. Kibiki C. Magis	APRIORI project 4: Remox study
AMANET	AMANET Ethics Support	USD 50,000	National Institute for Medical Research (NIMR), Tanzania	F. Mosha	Capacity strengthening KCMC ethics committee facilities

The contribution to creating a favourable public health environment, is less clear. SOPs and quality control strategies for TB research have been implemented in Kibong'oto hospital as a consequence of the collaboration with KCRC. In addition, malaria awareness has been raised by conducting the malaria vaccine study. Regular collaboration with national policy makers or regional health planners was not visible, which might not only reduce the relevance of the research question but also future use of results to improve health care.
By establishing a research collaboration with Kibong'oto national TB hospital, APRIORI contributes to research capacity strengthening of Kibong'oto staff, upgrading research infrastructure at Kibong'oto, as well as adding to embedding the research activities of KCMC into national health programmes. Furthermore, research activities within projects 2, 3 and 4 of APRIORI are conducted jointly with government health facilities and KCMC has a formal link with the MoH. However, despite these collaborations and governmental connections, it was unclear how the research agenda of KCMC/APRIORI was based on the needs of the national health programmes or other field sites. No strategy was in place to encourage the translation of research results into health policy and practices. In fact, Although the director of Kibong'oto now is a member of the Steering Committee of APRIORI, the MTR committee had the impression that communication problems noticed by the site assessment before the start of the

programme, still had not been adequately addressed. For example, the head of Kibong'oto was not aware that a formal MOU existed between Kibong'oto and KCMC and Kibong'oto was not adequately briefed on the APRIORI activities. Therefore, the MTR committee raised the concern that still communication between APRIORI and the field site is not very effective.

Conclusion and recommendations of the MTR committee:
KCMC is a strong institute that includes medical training (KCM College) and high quality care (KC Hospital) and has a high potential to become strong in research (KCRC) as well. APRIORI has contributed to individual capacity building by facilitating and sponsoring training of KCRC staff.
With regard to institutional capacity building, APRIORI has strongly contributed to building the physical infrastructure required for KCRC. However, strategic planning for KCRC as a research coordinating structure is still lacking and the Dutch partner does seem rather reserved in mentoring such planning. This might be a lost opportunity since successful establishment of KCRC will add to strengthening KCMCs role as a Centre of Excellence in the future. A strong coordinating research structure is even more urgent now that - based on APRIORI- KCRC already has attracted many additional grants in which more international partners are involved.
Although APRIORI executes research together with field sites, the relationship and communication with these sites needs strengthening. In addition, although official links exist between KCMC and the MoH, it is unclear how the needs of the MoH or National Health Programmes feed into the research and capacity strengthening objectives of APRIORI and vice versa.
Thus, the MTR committee concludes that although KCMC has a huge potential to become a strong centre in clinical research, APRIORI has not yet contributed to its full potential to institutional and environmental capacity building. The MTR committee recommends APRIORI to

- *continue strengthening institutional research capacity and focus on strategic planning and transparent operation of KCRC[3]. Together with an adequate strategy to retain researchers at KCRC, this will over time provide KCRC with a good basis of adequately trained and experienced researchers;*
- *to strengthen communication with policy makers and field sites/national health programme directors by including them in steering and policymaking steering bodies of APRIORI (and KCRC)[4].*

b) Relevance with regard to science
According to the awarded APRIORI grant application, "...*this research programme concerns multi-disciplinary translational research for malaria, tuberculosis and TB/ HIV with emphasis on clinical and public health studies conducted by African staff.(...) Activities will be conducted in each segment of the translational research pathway towards implementation: testing novel tools (for candidate malaria and TB vaccines), optimization (of current treatment protocols for TB) and implementation (public health and behavioural studies on adherence to and perception of drugs/ vaccines to improve compliance)." (p. 14)*

The malaria project (project 1) is up and running. It has identified and is establishing several interesting field sites, with high, medium and low malaria transmission. The pilot study has already been published and the project has made satisfactory progress. The TB vaccination project (project 2) is being delayed by internal issues at the collaborating institute (AHRI, Ethiopia) and these have to be solved before the project can start. Although the MTR report submitted by APRIORI mentions that activities for project 2 are planned for 2009, it is unclear whether this is feasible. The TB treatment studies (projects 3 (treatment TB/HIV) and 4 (shortening TB treatment)) have suffered from delays with regard to organizational and regulatory issues, but these issues seem to be under control and these projects are now starting up well. For project 3, patient enrolment is ongoing at Kibong'oto hospital. Other sites may be involved as well, depending on the progress. For project 4, the HIGHRIF

[3] APRIORI indicated upon receipt of this MTR report that a strategic plan for KCRC will be designed in the next months closely involving the Dutch partner and input from the Mali colleagues will be looked for.

[4] APRIORI indicated that a Scientific Advisory Committee for KCRC will be established in which delegates from field sites and directors of the national policy boards and programmes will participate.

study has obtained ethical approval and is awaiting permission to import the trial drugs. In summary, projects 1 and 3 are currently progressing well but with some delays. Projects 2 and 4 have not yet started. Whereas project 4 is expected to start shortly, it is unclear when project 2 will start in 2009.

The research projects have been divided over two research teams: Team A (executing research on malaria) and team B (HIV/ TB). These teams are supervised by the head of the clinical trials department of KCRC, Dr G. Kibiki. The projects are operating autonomously. They share office space and lab facilities at the new KCRC building and project 3 and 4 cooperate by using the same study sites and staff. The capacity building project (project 0) is supportive of all four research projects and as such contributes to some integration of the projects with regard to capacity strengthening. In neither projects, collaboration with a non-Dutch European partner was visible. In addition, the role of the Southern, non-Tanzanian partners seemed to be restricted towards exchange of individual students.
Implementation studies (public health and behavioural studies), as mentioned in the awarded proposal, were planned in collaboration with Maastricht University. However, behavioural research is virtually absent in the programme and the input of the Maastricht partner is very limited. Thus, the interdisciplinary part of APRIORI where social sciences and (bio-) medical sciences are integrated has not been implemented yet.
Research within APRIORI is carried out at several field sites. These include Kibong'oto national TB referral hospital (currently enrolling patients for APRIORI 3 study) and Mererani Tanzanite Mining Site. Numerous other sites were also mentioned in the awarded proposal but it is unclear to the MTR committee which research project works together with which field site. In addition, the role of field sites other then providing patients for enrolment in clinical studies are not clear.
The originally planned research projects have been supplemented with several small externally-funded studies to help the PhD students publish and compose their thesis. As the APRIORI output numbers are confounded with PRIOR output, it is unclear what the scientific output of APRIORI is until now.

Conclusion and recommendations MTR committee
The partnership programme is relevant with regard to scientific focus. APRIORI has made it possible to link research of KCMC to treatment at field sites, including Kibong'oto National TB Hospital. However, the interdisciplinary approach should be improved by the addition of public health and behavioural research. This will allow for translation of research results into practice, as was planned in the awarded APRIORI proposal. Although the establishment of two different research teams might be necessary for reasons of management, integration of different projects might have become limited.
Therefore, the MTR committee recommends APRIORI to

- *more clearly involve social sciences in the research programme[5];*
- *integrate the different projects, for example by organising meetings in which both research teams participate and each team presents their results. This will enhance scientific quality as well as team spirit[6];*
- *clearly communicate on APRIORI activities and output, separate from PRIOR or other programme's activities and output. The MTR committee would appreciate to receive a list of current APRIORI output separate from the PRIOR output.*

2) Efficiency
The programme suffers a delay of over one year in building the physical infrastructure of KCRC. The building has now almost been completed but completion required more funds than budgeted (provided by three other grants, see Institutional Capacity Building). Currently, KCRC employs 22 out of 24 staff

[5] APRIORI responded to this MTR report by indicating that additional funding for four behavioral research projects (studying adherence to HAART) was obtained from RVVZ and that these studies will be carried out in close collaboration with APRIORI. Although laudable, this does not relieve APRIORI of the recommendation to more clearly include social sciences in an integrated way in the research as planned in the original application.
[6] APRIORI's response to the MTR report indicated that KCRC will start KCRC weekly Research Meetings (organized by Dr Chilongola) to share research activities and results among KCRC staff and review literature.

foreseen for APRIORI and employment is hence on schedule. The remaining two persons (senior data manager and financial administrator[7]) will be recruited shortly.
The malaria vaccine trial (APRIORI project 1, building on PRIOR activities) is well underway (although with some delays due to meteorological issues) with three clinical field sites set up and the pilot study already published. It is however unclear what the role of MRTC was during the preparation phase for the trials. In the awarded APRIORI proposal, capacity building for testing new TB vaccines (project 2) was planned to start as soon as possible after awarding of the grant. However, the project has not started yet due to internal problems at AHRI, the main partner for this study. These problems must be solved before the project can start, resulting in a severe delay of at least two years. Activities are now planned to start in 2009, but is unclear to the MTR committee whether this is feasible.
Whilst waiting for ethical clearance for project 3, two PhD students wrote an article relevant to the subject and these articles have recently been submitted. Ethical clearance has now been obtained and currently patients are enrolling at Kibong'oto. Depending on the progress, Mererani site may also be used. For project 4, the original APRIORI application planned for two projects: the HIGHRIF study and the RIFMOX study. For the HIGHRIF study, study protocols have now been approved, although clearance to import trial drugs for the project is still expected. After clearance to import the drugs has been obtained, the drugs will be packaged and sent from Radboud to KCRC. As the HIGHRIF study was planned to be conducted between October 2007 and October 2009, this implies a delay of over one year. The RIFMOX study was planned to build on the results of HIGHRIF. This study will now be carried out at University College London outside APRIORI. It is unclear to the MTR committee how APRIORI (and thus NACCAP) contributes to the execution of the RIFMOX study.

Conclusion and Recommendations MTR committee
With regard to staff recruitment, the programme appears to be on schedule. Two staff members remain to be recruited and this is planned to occur shortly. Building the physical infrastructure required more time and funds than expected, but the building work is now almost completed.
Scientifically, the programme in general has had a slow start. While project 1 is making satisfactory progress, project 2 has not yet started and projects 3 and 4 have faced several delays (one year and more). However, project 3 has now started and project 4 will start soon. Thus, although there seems to be some progress, APRIORI suffers from a severe delay and probably will run short of time. This is somewhat surprising given the fact that APRIORI builds on activities and partnerships that already have been set up during the PRIOR programme. The MTR committee therefore recommends APRIORI to

- *Decide on the feasibility of executing project 2 within APRIORI in consultation with all partners[8]. It may benefit the entire programme if all efforts are directed to the projects 0, 1, 3 and 4 and continuation with regard to project 2 should be reconsidered. Of course, decisions on continuation of projects are the responsibility of APRIORI;*
- *Draft a revised plan aiming at achieving the set goals for each project within APRIORI, starting from the current state of affairs. This plan should contain a clear description of all activities required to achieve the objectives, including a realistic time frame and budget for 2009 and 2010. This plan should be included in the annual report of 2009 and serve as reference for future APRIORI activities.*

3) Effectiveness
Regarding individual capacity building, APRIORI has contributed to individual capacity building of APRIORI employees by trainings and courses. All APRIORI staff started in 2006-2007 received training in GCP and all use these acquired skills in practice. In addition, several APRIORI staff took other short-term and long-term courses. Although one PRIOR/ APRIORI PhD student chose to receive his PhD from Nijmegen University (expected in 2009), the other APRIORI PhD students will receive their PhD degree from Tumaini University. The total number of APRIORI PhD students, the project to which they are assigned

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[7] APRIORI indicated that a senior manager (financial and administrative), Mr Bwire, has been recruited by KCRC.
[8] APRIORI in their response to the MTR report indicated major improvements in the execution of project two, as will be outlined in the 2009 annual report.

and their progress is unclear to the MTR committee. For example, although the 2007 annual report provides a list of PhD students on page 19, on pages 23 and 24 two PhD students are mentioned (van den Boogaard and Urasa) that are not mentioned in the overview on page 19.

The effectiveness of APRIORI with regard to the institutional capacity strengthening that is essential for long term sustainability of KCRC is doubtful. 22 Out of 24 previewed staff have been employed and trained, including several bright young PIs, a building is constructed, but much other, important capacity required for running a research Centre of Excellence still needs to be built. For example, although a clear mandate of KCRC is expressed during the MTR meeting, written communication on strategic plans for research coordination, long-term sustainability and governance of KCRC is lacking and internal communication is weak. In addition, financial and managerial skills are insufficient (see Governance). This poses a significant threat to APRIORIs efforts to successfully establish a sustainable KCRC.

APRIORI has contributed to several courses of the KCM College, most notably the MSc course in Clinical Research, in which 12 students are enrolled until now. This course is embedded in the KCM College curriculum and it is still being improved with input from APRIORI.
In addition, KCRC has been successful in attracting a large number of additional research grants (see Table 3) with additional, international players, thereby embedding KCMC in an international network of researchers. However, at the moment, international partners seem to be able to operate fairly autonomously within KCMC in isolated projects and do not seem to contribute to KCMC as an institute. Without a strategic plan in place for KCRC to coordinate such collaborations, APRIORI will miss this important opportunity to strengthen the environmental capacity of KCMC.
In addition, embedding KCMC into national public health programmes leaves much for improvement: although the Ministry of Health is linked to KCMC through the GSF, national health programmes or other relevant stakeholders seem not to be actively involved in or have knowledge on activities of APRIORI. For example, the nature of the partnership and communication with Tanzanian partners at trial sites (Kibong'oto) is unclear. This also affects the possibilities of implementation of research findings. Workshops with local communities have been held to sensitise the community before starting a study, but no local stakeholders or policy makers are represented in the APRIORI management structure. In addition, Kibong'oto staff indicated that although they are used as important study site, they have not been asked to provide input into the research strategy. Thus, their commitment to the objectives of APRIORI might be low. Behavioural and public health studies are virtually absent from the programme. No communication and dissemination plan exists and no strategy to facilitate implementation of research findings is present.

Effectiveness of research activities differs widely between the different research projects. All PhD students have been identified and ethical clearance has been obtained for all projects. Project 1 (malaria vaccine) is under way and progressing well. Project 2 (capacity building for TB vaccine trials) has not started yet. Project 3 (treatment HIV/TB) has recently started enrolling patients. The HIGHRIF project (APRIORI project 4), after obtaining ethical clearance, is now awaiting approval to import the trial drugs. Capacity is being built for the RIFMOX study of project 4 and the Kibong'oto site will be used, but the study will be carried out at UCL. The PhD students of projects 3 and 4 wrote manuscripts on subjects relevant to these projects whilst waiting for ethical and regulatory issues. It is unclear what the scientific output of APRIORI is until now as the APRIORI output numbers are confounded with PRIOR output.

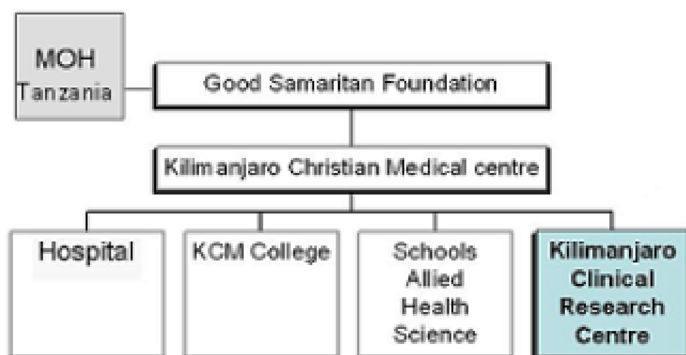
Conclusions and recommendations of the MTR committee
The APRIORI partnership has been effective in contributing to individual capacity building of both APRIORI staff and MSc Clinical Research students. Although most staff, including several talented PIs, have been employed, no strategic plan is in place to guarantee a fully functional and sustainable KCRC. Currently, the relationship with field sites seems to be weak: weak communication with no mechanisms in place to allow for linking (capacity strengthening and research) needs of sites to the APRIORI programme or for implementation of research findings. Except for project 1, with one pilot trial executed and published, none of the research projects already can show a clear research output. Thus, the MTR committee recommends APRIORI to

- *mentor KCRC staff to develop a strategic plan that ensures the sustainability of KCRC as a research coordinating centre of KCMC, including a plan to retain built capacity, improve internal communication and to build up participatory communication structures with partners in the trial sites as well as regional health planners;*
- *more clearly involve public health and behavioural studies, which will improve the possibilities to implement future research results. In addition, the MTR committee recommends APRIORI to actively build relationships of trust with policy makers and stakeholders. This should be done as early as possible (preferably during the development of research proposals, or in the case of research already started as early as possible). In addition APRIORI should engage more in open, two-way communication with both policy makers and local stakeholders at the field sites. This will enhance commitment of partners and will allow translation of research results into policy and practice;*
- *provide NACCAP and the MTR committee with a clear overview of current APRIORI output (separate from PRIOR output) and communicate clearly (both within APRIORI as well as externally) on research plans, activities and outputs: which grant contributes to what research resulting into what output;*
- *decide upon the way forward for project 2. Options to consider may include discontinuation of the project.*

4) Governance, administrative & financial aspects

KCMC is governed by the Good Samaritan Foundation (GSF, an alliance of the Lutheran Church in Tanganyika, the Anglican and Moravian Churches). KCMC obtains part of their recurrent cost budget (staff salaries, hospital running costs, equipment and drugs) from the government through the Ministry of Health (MoH). The Ministry of Health, as well as regional health services, are represented in the KCMC Governing Board. KCMC collaborates with Tumaini University to provide excellent education through KCM College. In addition, KCMC aims for KCRC to coordinate KCMC's research activities, develop a common research strategy for KCMC and carry out drug trials and implement the findings. KCRC is incorporated within KCMC, alongside the hospital, KCM College, and the Schools of Allied Health Sciences as follows:

Figure 1: position KCRC within KCMC

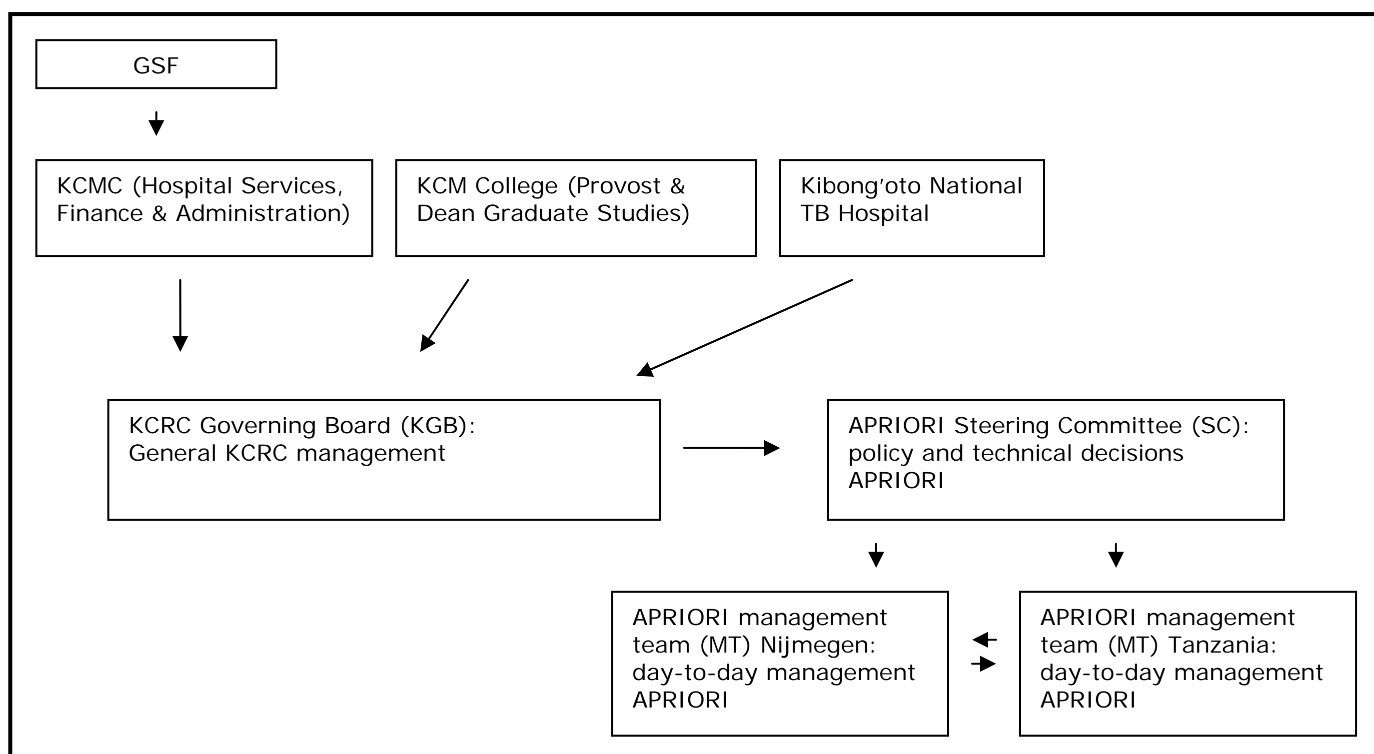


KCRC is managed by a Governing Board (KGB) that consists of the KCMC Director Hospital Services, the KCMC Directors of Finance and Administration, the Provost of KCM College, the Director of Graduate Studies and a representative from Kibong'oto National TB Hospital. For reasons unknown to the MTR committee, membership of Kibong'oto has been on hold for at least 9 months. The KCRC Governing Board is responsible for general KCRC management, reviewing all KCRC projects, maintaining the links with GSF and tuning the KCRC policy with the KCMC. The KCRC GB aims at meeting at least twice yearly, but has met only once every year (four meetings have been held starting in 2006).

APRIORI is governed by a Steering Committee that is the main decision making body of the APRIORI programme. It oversees all activities and meets twice yearly, once by teleconference and once in person.

In these meetings, project progress reports are reviewed and major technical and policy decisions are made. The Steering Committee is composed of scientists and no community members or health policy makers are involved in the APRIORI Steering Committee (please see Annex 2 for the composition of the APRIORI SC). The KCRC Governing Board provides guidance to APRIORI through the APRIORI Steering Committee when necessary.
Two APRIORI management teams (one in the Netherlands and one in Tanzania) are responsible for day-to-day management, overseeing implementation of policy and administrative decisions from the APRIORI steering committee (SCA) and KCRC governing board (KGB), providing managerial and logistical support to projects and decision making on staff, financial and communication issues. Each management team meets weekly and they communicate with each other mainly via email. Please see figure 2 for an overview of APRIORI governance structures.

Figure 2: APRIORI governance



Although on paper extensive governance structures are in place, APRIORI suffers from a lack of central management, strategic planning and oversight, as shown by multiple examples: APRIORI annual reports (2006 and 2007) are often unclear and figures differ between different reports and even within the same report; communication within APRIORI and within KCRC is weak, as well as the communication with Tanzanian partners and trial sites (see Communication); no plan aimed at short-, medium- and long-term sustainability of KCRC is present. Only research grants currently carry KCRC and no plans to attract core funding for research are in place (different partners within APRIORI even define core funding differently). Much opacity exists as to which new grant contributes to which research activities and how the grants relate to each other (aggravated by the repeated changing of study names, e.g. RIFMOX -> REMOX -> RAPID?). No plan to retain the trained staff to KCRC is present. In general, it remains unclear which partner has the final responsibility. Formally, the overall coordinator from Nijmegen is responsible for APRIORI, (including contributing to sustainability of KCRC) while encouraging transfer of responsibilities to the Tanzanian partner. Transfer of APRIORI responsibilities is laudable from the viewpoint of African ownership and should be continued, but in doing so the overall coordinator cannot be dismissed from his final and mentoring responsibilities (i.e. including the responsibility to set up a sustainable KCRC).

Furthermore, APRIORI financial management is weak, as shown by for example:

- piecemeal budget transfers that lacked mentioning which transfer was meant for what activity/ project;
- late remittance of funds from Nijmegen to Tanzania, and to the PRIOR account instead of the APRIORI account;
- late submission of retirement of advanced funding by KCRC;
- request by the Nijmegen partner to solve PRIOR issues dating back to 2004 before transferring the budget for 2009. Although the committee understands that all issues need to be solved, closer financial management should have prevented the need to solve outstanding issues from 2004 in the beginning of 2009. This delay has caused the complete stop of all research work in the beginning of 2009.

In addition, KCRC accountancy is weak as shown by (for example) the absence of cross references in accounting files between posting of imprests and retirements; no retirement and no invoice of several imprests, mistakenly marked as payments.

APRIORI has recognised the problems with financial management and has started addressing them. Financial management has recently been shifted to KCMC and APRIORI now acts under KCMC regulations. With KCMC guidance, KCRC has implemented KCRC financial regulations, in addition to PRIOR and APRIORI financial guidelines (regulating financial dealings between KCRC and RUNMC)[9]. Furthermore, an appropriate accounting program (Pastel) is now in use and the KCMC Directorate of Finance and an internal auditor are now directly involved in the supervision of the KCRC financial management. As a result, many constraints hindering financial management seem to have been lifted in recent months. The MTR committee appreciates this initiative. However, this improvement must be continued. KCRC for example urgently requires a senior financial officer to improve the financial management of KCRC. In addition, financial capacity building may be needed for project finances as well, as project finances are the responsibility of the PIs, but most PIs do not have experience in budgeting.

***Conclusion and recommendations MTR committee**:*

Only with excellent management structures in place, KCRC will be able to contribute to developing KCMC into a sustainable Centre of Excellence capable of coordinating all the research projects ongoing at KCMC, collaborating with international partners, reliably running research programmes and feeding policy makers with research results. Unfortunately, the (financial) management of APRIORI (and KCRC) is weak and seriously threatens KCRC to successfully establish and sustain a research coordinating role. The current pace of progress will not suffice for KCRC to be capable of managing a research centre after the completion of APRIORI. Therefore, rapid progress should be made and all partners should be fully committed to this goal. To address the managerial problems, the Dutch partner should show more commitment to mentor KCRC in managing APRIORI and provide guidance so that in time the full responsibility for the programme can be transferred to KCRC.

Therefore, the MTR committee recommends APRIORI to

- *build capacity or attract experienced institutional managers to KCRC permanently[10] and invest in responsible mentorship;*
- *develop a technical plan for 2009 (and beyond), including strategies to address the currently weak financial and administrative management[11];*
- *train the PIs in basic financial management, including how to handle and retire imprests. This will need to be done for all the PIs already there and each time there is a new PI. The East African Management Institute ESAMI in Arusha may be able to help with tailor made workshops;*
- *set up organizational / institutional coordination arrangements;*
- *set up a central grant management structure within KCRC to manage the large number of new grants. This will provide KCMC with the opportunity to present themselves as capable*

[9] This is apparently unclear within APRIORI as the MTR committee was informed during the MTR that the KCMC financial guidelines replaced the PRIOR and APRIORI guidelines.

[10] Please see footnote 7

[11] Please see Annex 5: an action list developed by APRIORI for the near future in response to the MTR evaluation

- *and credible partners. In addition, to circumvent problems associated with the different requirements of the different donors, it may be possible for a strong grant management office to negotiate common requirements;*
- *establish a regular and open communication structure with all partners, so that problems can be solved within the partnership using the expertise of all partners present. For example, MRTC, the Malian APRIORI partner, has extensive experience with financial management of a research centre. Knowledge exchange between all APRIORI partners will facilitate solving different types of problems.*

5) Communication and dissemination

APRIORI holds annual workshops with stakeholders and the community. Sensitization and results dissemination meetings were held with study site village authorities and whole community. The JMP, in which APRIORI project 1 participates, holds annual workshops for dissemination of results to stakeholders, thus many mechanism of information sharing seems to be in place. However, the results from these meetings, feeding back into APRIORI's research strategy, are unclear to the MTR committee. Communication with field sites appears to occur unidirectional. For example, Kibong'oto hospital mentioned that they did not provide input into the programme, but are only expected to contribute to the research execution. The regional TB and leprosy programmes were informed on APRIORI project 4, but this communication appears to be unidirectional as well and it is unclear what resulted from communicating this information. Furthermore, no regular communication toward Tumaini University and the MoE (through KCM College), MoS or COSTECH appears to exist. Although contacts exist with the Tanzanian MoH (through KCMC/ GSF), it is unclear whether these contacts are utilised effectively and with what results.

In summary, no APRIORI communication and dissemination plan, aimed at active and bidirectional communication with and dissemination of results to non-scientific stakeholders is operational.

Furthermore, APRIORI communication is mainly aimed at a scientific audience, but communication with the different scientific partners within APRIORI also seems to be weak. For example, from the report of the financial management mission of November 2008, it became clear that at that time, the Tanzanian management team was not aware of the MTR ToR and programme, whereas this knowledge has been available in Nijmegen since September 2008. APRIORI does use the PRIOR/ APRIORI newsletters and PRIOR website to communicate general APRIORI information and programme updates, but to whom this information is being distributed has not been clarified.

Conclusion and recommendations of the MTR committee

APRIORI communication with local stakeholders and study sites appears to occur only unidirectional and as a result, commitment of these partners to the programme appears to be low. Formal communication with COSTECH, MoS and MoE is absent and results from contacts with MoH (through GSF) are unclear. APRIORI does not have a communication plan aimed at stakeholders, communities and policy makers.

In addition, internal communication with APRIORI partners is weak. This weak internal communication undermines mutual trust and hampers programme implementation, which is a particular pity as the high potential of (South-South) exchange and capacity building is currently not being used.

Thus, the MTR committee strongly advises to improve communication both within APRIORI as well as with outside stakeholders. Therefore, the MTR committee recommends APRIORI to develop and implement an adequate communication and dissemination plan as soon as possible. This C&D plan should include plans to:

- *strengthen communication strategies between all partners within the APRIORI programme that will allow for optimal information exchange;*
- *establish two-way communication structures with field sites and communities, allowing for bidirectional information and strategy exchange. In this way, field sites and communities will be more committed to the programme and the programme will most likely benefit from their input;*

- *improve the strategy for implementation of research results by seeking contact and building a relationship of trust with policy makers (at MoH, MoE, MoS), COSTECH and the national health programmes as soon as possible. Early involvement of health systems managers, policy makers and the community, as well as the production of policy briefs, will encourage translation of relevant research results into policy. Suitable opportunities for this may include the yearly health sector review with donors and Ministry of Health in Dar es Salaam and the monthly meetings between research institutions and the Ministry of Health, in both of which KCMC could participate. One on one meetings should be sought as much as possible as they are more effective than large meetings. Proper execution of these activities may help attract core funding, thus improving KCRC's sustainability and enhancing KCMC's chances to become a Centre of Excellence.*

6. Future of APRIORI

During the MTR, APRIORI presented a SWOT analysis of the APRIORI programme. This SWOT was adjusted by the MTR committee including the committee's findings. Please see annex 3 of this report. Strong points of APRIORI include the choice of partners: the strong KCMC institute, with high levels of care (KCMC Hospital) and teaching (KCM College within Tumaini University) and a good potential to become strong in research as well, and several strong African partners (MRTC in Mali and AHRI in Ethiopia). Numbers of experienced researchers are being increased by APRIORI's capacity building activities. The APRIORI partnership has attracted several additional funds already.
However, multiple significant weaknesses are also identified. The management of APRIORI (both financial and administrative) is weak. Interdisciplinarity of the programme is low and involvement of social scientists is not visible. Although the involvement of non-Dutch European partners was a prerequisite for obtaining the grant, in practice they are invisible. All research activities are funded by external grants and no strategic plan for core funding could be produced upon the MTR committee's request. The programme suffers from a lack of concept of integrated organizational research management, including collaboration with other research projects outside or derived from APRIORI. Communication between partners could be improved, and although strong African partners are represented in APRIORI, the expertise of these partners has not fully benefited APRIORI yet. APRIORI does not involve health system managers or the community early on, and communication with the sites is weak.

Conclusion and recommendations MTR committee

The MTR committee considers the weak central management, lack of oversight and absence of strategic planning of APRIORI to be real and serious threats, not only to the programme itself, but also to the sustainability of KCRC as a whole. For KCRC to be sustainable, excellent management structures need to be in place and a clear strategy for short-, medium- and long-term sustainability of KCRC should be developed. Plans to attract core funding and to retain the trained staff to KCRC are urgently needed. In addition, the improvement of financial management as started by APRIORI will need to be extended, notably by recruiting an experienced administrative manager.
A strong (strategic, administrative and financial) management structure is even more important now that a large number of grants have been awarded to KCMC, building on APRIORI, which poses the threat that KCRC will not be able to manifest itself as a credible and reliable partner. The coordinating partner of APRIORI, being responsible for the implementation of the objectives of APRIORI, not only has a responsibility to encourage African ownership, but also to provide mentorship whenever needed. The MTR committee is worried by the apparently low commitment of the Dutch partner to mentor KCRC (administrative) management.
Furthermore, environmental capacity strengthening is weak: although the Ministry of Health is linked to KCMC through the GSF, ministries, national health programmes or other relevant stakeholders seem not to be involved in APRIORI. The communication with programme partners is weak. For example, the nature of the partnership and communication with Tanzanian partners at trial sites (Kibong'oto) is unclear. All these stakeholders should not only be involved during the programme, but already from the

start of formulating the programme proposal in order to gain needs-driven research, commitment of (these non-scientific) stakeholders and implementation of research results into policy.
To address the weaknesses and secure continuation of the NACCAP funds until 2010, the MTR committee recommends APRIORI to:

- *assist KCRC in improving KCRC management. An important partner in this respect could be MRTC (Mali), which has wide expertise in establishing and maintaining a regional Node of Excellence. Communication with this partner should be improved and their assistance should be actively sought. If not available, external management expertise should be sought to help out;*
- *assist KCRC in making a solid plan to retain people. Clear career pathways for young scientists (whilst understanding the use of financial as well as non financial incentives) should be developed, for both research as well as management. This strategy should be advocated well within and outside the institution;*
- *develop a sound communication strategy, including the need to advocate research as a career with the Ministries of Health, Science and Education;*
- *to improve sustainability, activities should not solely depend on external grants, but core funding is needed, which may come from GSF/ KCMC. On short term, additional core funding may be available from the Dutch Embassy. However, core funding needs should be well defined and strong advocacy to GSF is required. Although the original application mentions that after APRIORI, staff salaries will be taken over by GSF, a solid core funding strategy should be developed. Collaboration and information exchange with other Tanzanian research institutes may be fruitful whilst developing this core funding strategy. This collaboration could also benefit the development of a strategy to retain trained staff to KCRC;*

In conclusion, the MTR committee thinks that the potential for KCMC to become an excellent research centre is high, but that multiple important weaknesses seriously threaten the contribution of KCRC to successfully establish and sustain a research coordinating role. Therefore, the MTR committee recommends NACCAP to:

- *Allow continuation of APRIORI funding only on the strict condition that the partnership programme convincingly addresses the weaknesses mentioned in this report. The MTR committee recommends NACCAP to closely monitor the progress of APRIORI in addressing these weaknesses during the coming six months. The programme should succeed in implementing improvements (as suggested above) before 1 October 2009.*

Annex 1: MTR programme APRIORI

21 January 2009

Time	**Subject**
9.00	Welcome (chair)
9.15	Introduction individuals present Introduction partnership programme (coordinator)
9.30	Introduction MTR committee, aim of MTR (chair MTR)
	Presentations (by partnership programme)
10.00	Relevance: science; discussion
10.30	Relevance: capacity strengthening; discussion
11.00	**Coffee, tea**
11.30	Governance, Communication & Dissemination
12.30	**Lunch**
13.30	Efficiency & effectiveness: discussion
14.30	Conclusion: SWOT to be made by partnership and MTR together
16.00	Closure and dinner NACCAP

22 January 2009

Time	**Activity**
8:30- 11:30	Individual Interviews
11:30-12:00	**Tea and poster viewing**
12:00-13:45	Tour of KCRC/Biotechnology and KCM College
13:45-15:00	**Lunch**
15:00-17:00	Tour of Kibong'oto site

During tea/coffee breaks: view posters prepared by APRIORI supported postgraduate students.

Participants:

- Prof. John Shao	Executive Director KCMC
- Prof. Franklin Mosha	Director KCRC-APRIORI
- Dr. Mark Swai	Director, DHS
- Dr. Gibson Kibiki	Member MT APRIORI Tanzania
- Dr. Elton Kisanga	Member MT APRIORI Tanzania
- Dr. Jaffu Chilongola	Member MT APRIORI Tanzania
- Prof. Egbert Kessi	Provost, KCM College
- Dr. André van der Ven	Director APRIORI, The Netherlands

List of interviewed people:

Ms Hilda Mungure (Director of Finance KCMC)
Dr André van der Ven
Dr Jaffu Chilongola
Ms D. Olotu (Director Personnel KCMC)
Dr Matthew (LSHTM)
Dr Morrisey (Duke University)
Dr Gibson Kibiki

Annex 2. APRIORI Steering Committee

André van der Ven	Director APRIORI & PI project 0
Robert Sauerwein	Deputy Director APRIORI & PI project 1
John Shao	Executive Director KCMC
Frank W. Mosha	Director KCRC
To be recruited	Deputy Director KCRC
William Dolmans	PI project 0
Tom Ottenhoff	PI project 2
Martin Boeree	PI project 3
Rob Aarnoutse	PI project 4
Ogobara Doumbo	Director MRTC, Mali
Howard Engers	Director AHRI, Ethiopia
Barati Mleoh	Kibong'oto National TB Hospital

Annex 3. SWOT APRIORI

Strengths

- APRIORI is well embedded in strong KCMC institute that includes medical training (KCM College) and care (KC Hospital) and BTL, with high potential to become also strong in research (KCRC). This embedding makes it possible to recruit young students and facilitate career options for researchers;
- Recognition of weak financial management and efforts to address this;
- APRIORI – through KCMC- has access to the well organized ethical review system of Tanzania;
- APRIORI has made it possible to link research of KCMC to treatment at field sites, including Kibong'oto National TB Hospital and access other field sites;
- APRIORI has identified strong partners in Mali and Ethiopia;
- APRIORI already has generated additional research grants and scientific publications;

Weaknesses:

- The management of APRIORI is weak: responsibility of overall coordination is unclear (Dutch partner who coordinates APRIORI takes too low responsibility in coordinating financial and administrative issues), communication between the partners is not optimal[12].
- Lack of concept of integrated organizational research management, including collaboration with other research projects outside or derived from APRIORI;
- Too many different grants obtained while weak management -> loss of credibility (recommend better coordination and avoid stretching yourselves too thin);
- Research activities depend on external grants. No common understanding of the definition for core-funding and as a result unclear needs formulated. No operational strategy in place for core-funding of KCRC and/or research[13];
- Slow progress and even severe lagging behind of several research projects;
- No strategic plan for the coming five years is available;
- No visible involvement of social scientist[13];
- No early involvement of health system managers or community (to encourage translation of relevant research results into policy)[13];
- Lack of evidence of real collaboration with European partners (non-Dutch);
- Inadequate use of the opportunity to learn from strong African partners;
- Ethiopian research collaboration not clear not moving forward;
- Weak communication with sites (Kibong'oto) and communication at district level;
- Qualitative indicators on grants obtained and publications published are difficult to gather, which again points towards weak overall management and overview.

Opportunities:

- Increased international commitment for and funding for CT in HIV/TB/malaria;
- Increased international and African commitment for African owned CoE, NoE in Africa;
- The collaboration between KCMC and strong centers (MRTC, Mali and in Ethiopia, AHRI) offers opportunities to learn from experience;
- Good possibilities to link up with strong Tanzanian partners;
- New unit at KCMC in social sciences and as such engagement by KCMC of Sr. social scientists;
- Good BTL lab facilities and engagement of new overall Lab manager;
- Special government scheme for salaries for scientists.

Threats:

- Competition for experienced researchers (brain drain) – clear career pathways for young scientists, understand use financial as well as non financial incentives;
- No proof of future commitment for core funding from GSF/KCMC? (Advocacy to GSF)[13]

[12] Although APRIORI considers this issue to be solved, the MTR team has seen no proof that this is the case and thinks this issue should be included in the current SWOT analysis

Annex 4. Abbreviations

AHRI	Armauer Hansen Research Institute
APRIORI	African PRIOR Initiative
BTL	BioTechnology Laboratory
CoE	Centre of Excellence
COSTECH	Commission for Science and Technology
DC	Developing Country
DGIS	Dutch Ministry of Foreign Affairs
EDCTP	European & Developing Countries Clinical Trial Partnership
ESAMI	East African Management Institute
GCP	Good Clinical Practice
GLP	Good Laboratory Practice
GSF	Good Samaritan Foundation
IPR	International Patent Rights
IRB	Ethical Review Board
ITM	Institute for Tropical Medicine
JMP	Joint Malaria Programme
KCMC	Kilimanjaro Christian Medical Centre
KCM College	Kilimanjaro Christian Medical College
KCRC	Kilimanjaro Clinical Research Centre
KGB	KCRC Governing Board
LSHTM	London School for Hygiene and Tropical Medicine
MoE	Ministry of Education
MoH	Ministry of Health
MoS	Ministry of Science
MOU	Memorandum of Understanding
MRTC	Malaria Research and Training Centre
MS	Member States
MTR	Mid-Term Review
MUHAS	Muhimbili University of Health and Allied Sciences
NACCAP	Netherlands-African Partnership for Capacity Development and Clinical Interventions against Poverty-related Diseases
NIMR	National Institute for Medical Research
N-N	North-North
N-S	North-South
PDP	Personal development programme
PRIOR	Poverty-Related Infection Oriented Research
R&D	Research and Development
RUN	Radboud University Nijmegen
RUNMC	Radboud University Nijmegen Medical Centre
SC	Steering Committee
SCA	Steering Committee APRIORI
S-S	South-South
SSI	Statums Serum Institute
SWOT	Strenghts, weaknesses, opportunities, threats
ToR	Terms of Reference
UCL	University College London

Annex 5 Action plan for APRIORI in response to the mid-term evaluation

a. Visit van Asten and van der Ven to KCMC to discuss mid-term evaluation report APRIORI. Feedback of all members MT will be incorporated in final response which will be sent to NWO 22 June 2009.
b. By October 1st KCRI will have drafted a Strategic Plan for its operations in the short, medium and long term.
   - The Strategic Plan shall include a Communication and Dissemination Plan, including strengthening of communications with policy makers and other societal bodies.
   - The Strategic Plan shall address a broad scope of science, including social and biomedical sciences, in response to societal needs.
   - A grant management structure will be a central element of the Strategic Plan for KCRI.
   - Revise Organogram.
   - Invite Mali to design strategic plan
   - Coordination of the design of the strategic plan for KRCI will be carried out by Prof Mosha and Dr van der Ven.
c. The KCRI Management Team shall address the cohesion between various APRIORI projects in its meetings: **action MT KRCI.**
d. A special KCRI research meeting is being established: **action J. Chilongola.**
e. In its 2009 Annual Report, the APRIORI management will include a proposal, timeline and budget for 2010 as requested; this will include strengthening of management of APRIORI: **action: Management teams APRIORI**
f. Submission APRIORI annual report 2008 to NWO- WOTRO: **action H. van Asten**
g. Establishment KCRI Scientific Advisory Committee: **action F. Mosha**
h. Training PI in financial and administrative issues: **action senior manager E. Bwire**.
i. Communication: organize meeting November in Nijmegen: **action MT Nijmegen**
j. APRIORI news letters will be distributed: **action MT Nijmegen**
k. Submit KCRI application to COSTEC: **action F. Mosha**
l. Financial procedures will be further implemented and streamlined now our senior administrative officer at KCRI is employed: **action E. Bwire**
m. Job description senior manager: **action F. Mosha**
n. PhD plan for all PhD researchers: **action A. van der Ven**
o. KCRI staff evaluation

Moshi Tanzania
Dr A van der Ven
Drs H van Asten
Dr F Mosha
Prof J Shao