KILIMANJARO CHRISTIAN MEDICAL UNIVERSITY COLLEGE (KCMUCo)

OF

TUMAINI UNIVERSITY MAKUMIRA (TUMA)

RESEARCH CONSULTANCY AND INNOVATIONS POLICY

Approved by ……………………………………. on …………………………

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ABBREVIATIONS AND ACRONYMS

COSTECH   Commission of Science and Technology

CRERC   College Research and Ethical Review Committee

DPAA   Deputy Provost Academic Affairs

DPS   Directorate of Postgraduate Studies

DRC   Directorate of Research and Consultancies

GSF   Good Samaritan Foundation

KCMC   Kilimanjaro Christian Medical Centre

KCMUCo   Kilimanjaro Christian Medical University College

LCMS   Learning and Curriculum Management System

MDGs   Millennium Development Goals

MEPI   Medical Education Partnership Initiative

MUHAS   Muhimbili University of Health and Allied Sciences

NGOs   Non-Governmental Organisations

NIMR   National Institute for Medical Research

NSGRP   National Strategy for Growth and Reduction of Poverty (MKUKUTA)

R&D   Research and Development

RGO   Research and Grants Office

SOPs   Standard Operating Procedures

TFDA   Tanzania Food and Drug Authority

URF   University Research Fund

FOREWORD

Research, consultancy and innovation are central values to KCMUCo's mission as it is widely accepted as an integral part of transformative education. The purpose of research is to advance existing knowledge in a discipline, to fill significant gaps in such knowledge, to investigate health determinants that are relevant to our settings and devise appropriate clinical, basic sciences and public health interventions.

This university research and innovations policy is intended for both internal and external users. It aims at providing oversight of research and consultancy services. It aims to respond to the need of the University, Faculty and Students to conduct researches relevant and contributory towards alleviating disease burden in resource-limited settings, while building on analysis of lessons learned from previous support to research as well as on perceived expectations of our society. The research and innovations policy development is embedded on the KCMUCo's Strategic Plan 2011 to 2015 (section 1.5 and 4.6) and Article 5 of The Tumaini University-Kilimanjaro Christian Medical University College Charter 2010, (Charter and Rules 2010), that established the KCMUCo.

This university research, consultancy and innovation policy addresses and acknowledges health research priorities in a broader perspective. It aims at fostering collaboration among the multidisciplinary community of students, public and private companies, non-governmental organisations (NGOs), society and the supporting faculty.

Signed: ……………………………………........... on …………………………

PROVOST,

KCMUCo.

PREAMBLE

Research plays a very crucial role in the socio-economic development of any society. It can lead to the improvement of the quality of people's life e.g. by increasing life expectancy, enhancing agricultural productivity and food security, and developing technologies that would simplify people's lives. Research has been responsible for the economic prosperity currently enjoyed by all developed nations. The industrial revolution in Europe during the 18th and 19th centuries was based on extensive scientific research that led to a number of landmark discoveries by scientists from Germany, England, France and Italy. Thus, Research and Development (R&D) cannot be separated from the development of a nation.

In Tanzania, the developmental impact of R&D activities has been constrained by a number of challenges which include weak and uncoordinated leadership in the R&D systems, the presence of weak multi-disciplinary interaction and collaboration among R&D institutions, exclusion of socio-economic research, inadequate mechanisms of including new and emerging research areas into the national research agenda, and low participation of the private sector in research activities. The above challenges have also been exacerbated by inadequate human resource; over dependence on foreign funding and inadequate appreciation of the role of research in national development. Consequently, research has not contributed to the country's development as it should have been.

Policies aimed at guiding research, consultancy and innovation play an important role in planning national economic development. These policies have been changing with time to reflect societal needs. Principally, these policies have moved through three eras. The 1960s and early 1970s was the era of Science Policy whereas the 1970s and 1980s was the era of Science and Technology (S&T) policies. The 1990s to 2000s is characterized by Science, Technology and Innovation (STI). As opposed to the first two previous eras, the STI era emphasizes the role of science in national development, and it fully integrates research into the national development vision and implementation strategies. This ensures that the scientific and technological knowledge generated by research institutions is responsive to the socio-economic needs of the country.

It is quite a challenge that the national priorities in health research should change over time. New health problems and new diseases continue to emerge and re-emerge. In recent years we have witnessed emergence of Ebola, HIV/AIDS, Hepatitis C, Severe Acute Respiratory Syndrome, Avian Influenza, Marburg fever and Chikungunya Virus Disease. In addition, the emergence of new subtypes of HIV and resistant strains of microorganisms including malaria parasites, *Mycobacterium* and *Staphylococcus* species, have been recognized. In an attempt to address these challenges, major funding agencies in Europe, Canada and USA have announced a number of small and large research grants specifically targeting the so called "neglected tropical diseases".

THE NEED FOR THE UNIVERSITY RESEARCH AND INNOVATIONS POLICY

KCMUCo was established in 1997 as one of six constituent colleges of Tumaini University at Makumira (TUMA), by the Evangelical Lutheran Church of Tanzania. KCMUCo is the second largest Medical College in Tanzania after Muhimbili University of Health and Allied Sciences (MUHAS). Currently, the College operates on a Charter signed by the President of the United Republic of Tanzania on March 24th, 2010. KCMUCo collaborates with the Kilimanjaro Christian Medical Centre (KCMC) - a government supported referral hospital that has a catchment area of nearly 15 Million people in Northern Tanzania. The Hospital serves as a teaching centre for the College.

Training at KCMC started after its establishment in 1971 through 14 Allied Health Schools which offer academic qualifications at different levels; these include schools of dermatology, occupational therapy, optometry, physiotherapy, orthopaedic technology, nursing, health records and Assistant Medical Officer (AMO). KCMUCo offers a number of undergraduate and postgraduate programmes including Master's, Ph.D and postdoctoral training in health sciences. Both KCMC and KCMUCo have managed to attract international collaborative research projects involving senior and distinguished scientists on a number of south-south, north-north and north-south collaborations.

A clear research policy is necessary to guide all stakeholders on effective and efficient resources utilization; strengthening and improvement of research activities; and to continuously address quality and relevance with respect to the problems and needs of the society. This Research and Innovation Policy, therefore assumes the responsibility for providing guidance on how research should be conducted at the University.

The overall aim of the Research, consultancy and Innovations Policy is to strengthen research capacity and output, and increase the contribution of KCMUCo to the world of knowledge and innovation. This will be achieved through four strategic objectives as shown in Chapter 1.4 below.

To address the research policy needs, a Provost's Sub-Committee was appointed to formulate KCMUCo's research, consultancy and innovations policy. The full membership of the Sub-Committee is as follows:

Dr. Elton R. Kisanga	B-Pharm., MSc., Ph.D
Dr. Declare L. Mushi	BA, MA, Ph.D
Dr. Reginald A. Kavishe	BSc-Educ., MSc., Ph.D
Dr. Sia E. Msuya	MD, MPhil., Ph.D

Terms of Reference

The terms of reference were outlined as follows:

(i) To formulate Research and Innovations Policy for the KCMUCo

(ii) To outline how overheads and consultancy services could benefit both the KCMUCo and faculty members

(iii) To deal with any other issues concerning grants administration, research and KCMUCo's Intellectual Property rights.

The Committee used the following techniques to gather information for the Policy:

(i) **Review of research policies and documents**

The Sub-Committee reviewed research policies and other related documents solicited from Universities and research institutions in Tanzania and other countries. Among others, research policies reviewed were from Muhimbili University of Health and Allied Sciences (MUHAS) National Institute for Medical Research (NIMR), Commission for Science and Technology (COSTECH), University of Nairobi and the University of Makerere.

(ii) **Presentations from the key University organs**

The Sub-Committee received reports on research compiled by the Deputy Provost Academic Affairs, and various Deans and Directors.

(iii) **Meetings/Workshops**

The Sub-Committee held a total of eight (8) meetings at KCMUCo Board Room. The information availed to the Sub-Committee was analysed and discussed during these meetings. After going through several drafts, the Sub-Committee subsequently formulated the attached KCMUCo's Research, consultancy and innovations Policy.

CHAPTER ONE: INTRODUCTION AND BACKGROUND

1.1 Statement of Mission, Vision and Rationale of KCMUCo

Without prejudice to the generality of Article 8 of the Tumaini University Charter of Incorporation 2009, KCMUCo has a broad mission of standing out as a centre of excellence in teaching, research and development of health professional who influence society through dignified health care delivery to promote the love and compassion of Christ.

The KCMUCo's Research and Innovations Agenda is embedded within the KCMUCo's Charter 2010 (Article 5) and KCMUCo's Strategic Plan 2011 to 2015 (Section 1.5 and 4.6). The mission of the College is Teaching, Research and Healing in order to proclaim Christ, in the sense that:
- We are called to serve by teaching so that people can see the light;
- Through healing services, the people of Tanzania can be set free from bondage of disease and spiritual sickness;
- By creating knowledge through research, the people of Tanzania can be masters of their own physical environment and overcome poverty.

1.2 KCMUCo's Research Governance

The governance and regulation of research, consultancy and innovation has become increasingly complex. Planning, coordination and administration of institutional research and innovation requires an increasingly professional approach whereby managers and administrators must provide high quality, client-centred services to diverse group of internal and external stakeholders. This implies the appointment of both academic and administrative staff to specific research positions and upgrading the capabilities of staff throughout the institution to better manage the research agenda.

The Deputy Provost for Academic Affairs (DPAA) is responsible to the Provost in co-ordination of activities of faculties, institutes and Directorates of the College in the conduct of academic research and consultancy activities of the University College (Article 17(b) of the Charter).

In 2002, KCMUCo established the Directorate of Research and Consultancies (DRC) which co-ordinates research, consultancies as well as sponsored/cross-college research and funding initiatives. The main functions of the directorate are:
- To provide a favourable environment for conducting research,
- To ensure responsible conduct of research (RCR)
- To organize small-grant support to faculty, students and collaborators.
- To oversee and coordinate research activities

The College Research & Ethics Committee (CRERC) and the publications committee are responsible for ethical clearance of research proposals and dissemination, respectively.

1.3 National Context

The Government of the United Republic of Tanzania realizes the importance of health research in the provision of information for health planning and decision-making. It is this realization which led to the creation of the National Institute for Medical Research (NIMR) which was given a broad mandate to oversee all matters pertaining to health research in the country and provide timely evidence-based information to the Ministry of Health and Social Welfare for decision making and planning.

Priority setting in health and health research is an important activity for better utilization of meagre resources, particularly, in resource-poor countries like Tanzania. Since public investment in research is constrained by limited resources, it is very important to identify high priority areas in which to invest those resources.

Tanzania has gone a long way in identifying national health research priorities since 1999. A process of documentary review, research, consultation and workshop of technical groups and stakeholders has resulted in the identification of the major health challenges. The outcome of the process led to the identification and development of the current national health research priorities under the guidance of the Tanzania National Health Research Forum.

The ministry of Communication Science and Technology is mandated to coordinate research and development activities in Tanzania. However, there are other ministries that oversee research and development activities in their respective sectors. On the other hand, the National Commission for Science and Technology (COSTECH), which was established by Act No. 7 of 1986 (CAP 226 R.E. 2002), is the principal advisory organ to the Government on all matters pertaining to scientific research, technological development and coordination of research activities in the country.

Tanzania Food and Drugs Authority (TFDA) has legal responsibility of ensuring that all clinical trials obtain a written authorization prior to commencement. The "Guidelines on Registration of Pharmaceutical Products for Clinical Trials in Tanzania", were first developed and implemented under the Pharmaceuticals and Poisons Act, 1978. The current TFDA guidelines have been made under the provisions of Section 63(1) of the Tanzania Food, Drugs and Cosmetics Act, 2003. TFDA also conducts regulatory inspection of clinical trials (monitoring and evaluation) in the country.

Tanzania is a signatory of Millennium Development Goals (MDGs) and committed to reduce hunger, illiteracy, women discrimination, diseases and environmental degradation by the year 2015. Research is key in contributing to achievements of the goals by; providing evidence-based information on gaps and interventions which are successful, foster

partnership between different disciplines and stakeholders and bring economic development.

Health research has been given priority within existing national plans. In the year 2005, a National Strategy for Growth and Reduction of Poverty (NSGRP) popularly known as "*Mpango wa Taifa wa Kukuza Uchumi na Kufuta Umaskini*" (MKUKUTA) was rolled out. NSGRPacknowledges that research that is tailored to local environment is vital for innovative technological advances that it helps to increase returns and productivity to all sectors. The policy encourages different stakeholders to collaborate closely with training and research institutions to achieve technological advances. In health, the NSGRP prioritises strengthening of routine data collection systems to generate and disseminate indicators for measuring health service delivery; Increase the number of skilled health care providers; and Improving governance and accountability mechanisms.Under NSGRP there was an attempt to focus on the "priority" sectors of education, health, water, agriculture, rural roads, the judiciary and land.

1.3.1 Current Institutional Situation

Through the Medical Education Partnership Initiative (MEPI) grant, KCMUCo is now one of a few African Institutions that are connected with the high-speed internet through the fibre-optic connection. This fast connection has revolutionized medical education training at KCMUCo through the full-featured Learning and Content Management System (LCMS+) where lecture materials are provided and examinations are conducted electronically.

The level of awareness and acceptance of the technology by both students and the faculty has brought major improvement in the quality of training. To what extent the ICT infrastructure improvement has enhanced the postgraduate training or research capacity is less clear. Therefore, there is a need for a deliberate attempt to link ICT growth and expansion to improve on research delivery at all levels.

While KCMUCo confronts challenges and other sets of complex research issues, the capacity to engage in cutting edge research is fairly limited. The constraints and challenges the University faces include:

o The lack of sufficiently and suitably trained staff who have a career in research management.
o The lack of suitable facilities to intensively support such program; human and financial resources essential to operate, maintain and sustain the research programs.
o The shortage of operating funds
o Limited private sector involvement in research in our University
o Limited networking with international research community to access state of the art and useful technologies

1.4 Strategic Objectives of the Research, Consultancy and Innovations Policy

The college, through this policy will promote both basic and operational researches which could help in the design of innovative health interventions in order contribute to the MKUKUTA's health goals.

The strategic objectives of this research policy are to:
  I.   Transform KCMUCo into a centre of excellence for research and innovations
  II.   Initiate and strengthen collaborative research with national, regional and international institutions
  III. Enhance the profile of the KCMUCo through top quality research publications and dissemination
  IV.   Implement thriving undergraduate and postgraduate programmes
  V.   Collaborate with industry in knowledge management, innovation and wealth creation.
  VI.   Mobilize resources to improve research infrastructure and services

1.5 Guiding Principles of Key policy Areas

A draft Research and Innovations Policy, CRERC's Standard Operating Procedures (SOPs) as well as brochures on conduct of research at KCMUCo are in place. In addition to policy areas (i) to (vii) below, KCMUCo will develop regulations regarding research assurance systems including conflict of interest policy, how to handle research misconduct, contracts and subcontracts.

  I.   **Protecting human research subjects and laboratory animals used in research**
    o   The involvement of humans as research subjects shall be governed by procedures consistent with established international standards espousing the principles of respect, beneficence and justice. In particular, the KCMUCo researchers shall subscribe to the Council for International Organizations of Medical Sciences (CIOMS) in respect to research involving human subjects as well as TFDA and NIMR standards.
    o   The use of laboratory animals shall be governed by the established international conventions. This would include proper housing, food, light and humane treatment.

  II. **Responsible Conduct of Research (RCR)**
    o   KCMUCo shall ensure that researchers working within the University and/or who are associated with the University shall work in accordance with established national and international ethical standards. The University shall review these ethical standards from time to time as dictated by advances in knowledge. This will enhance compliance by the students, visiting experts and the faculty to the complimentary aspects in clinical research ethics (bioethics), research integrity (RI) and intellectual property (IP) and Responsible Conduct of Research (RCR). The broader achievement

is to prepare the students and faculty both philosophically (theoretically), but also practically into becoming research managers (governance).

III. Fair Reporting of Research Findings

o Researchers are expected to maintain the highest degree of intellectual honesty in the design, conduct, data analysis, reporting of research findings and in acknowledging significant direct and indirect contributions made by colleagues and collaborators.

o Researchers are expected to be honest regarding reporting of any conflicts of interest that might exist in relation to the specific works they are carrying out. Researchers have an obligation to report/disclose any real or potential conflicts of interest to the University and in reporting of their research findings.

IV. Intellectual Property Rights

KCMUCo shall provide an enabling environment that encourages knowledge and product generation (licensing). In order to protect its researchers, the University shall institute appropriate mechanisms to protect intellectual property rights of its students, collaborating researchers and faculty. Such protection shall include ensuring that unique inventions are patented so as to protect the rights of the University as well as inventors associated with the University in line with KCMUCo's Intellectual Property Policy.

V. Strengthening of Research Management and Coordination

o The Policy recognizes that research activities carried out through various Academic and Research Units in the University have to be managed and coordinated properly for the benefit of the entire University in a fair and transparent manner.

o The University shall establish the Research and Grants Office (RGO) to coordinate and assist in grant identification and application procedures. The Unit will also oversee that research overheads are properly managed for the benefit of KCMUCo

o This Policy focuses on National Health Priorities and International Trends.

o The Directorate of Research and Consultancies (DRC) is the overall coordinator of all research matters at the KCMUCo. The DRC advises the Academic Board on research strategies to be pursued, develops policy (including strategic and scholarships policy for research students in liaison with DPS) and reviews progress in these areas.

o The Grants Office has been tasked to manage funds acquired for and committed to research and scholarship at the KCMUCo i.e. internal and external research funds defined under this category. It ensures distribution and award of research grants and scholarships to recipients on fair and competitive basis.

o Departments and schools are required to indentify research themes of priorities for their staff and students. Departments are required to manage student's research projects for theses and dissertations for their students through the DPS (postgraduates) and the DRC (undergraduates). These priorities have to be in line with the University's Strategic Plan.

VI. Career Development guidelines – academic and non-academic staff

KCMUCo has established a career development committee which shall deliberate on the career paths and resource development plan with the aim of improving; the working environment, the quality of teaching and research services rendered by the KCMUCo employees.

The committee shall also strive to improvement of gender responsiveness and opportunities for disadvantaged groups at the University through research and innovations. Particular attention will be paid to:
o Providing opportunities for staff and students to train in gender-focused research methodology.
o Provide opportunities addressing priority needs and plan, organize, coordinate interventions that are responsive to priority community health needs.
o Encourage involvement of women in research teams.

VII. Consultancy services and fees

KCMUCo values the undertaking of consultancy and commissioned work by its staff: these forms of activity enhance its external profile by developing our engagement with the community, extending the societal impact of College expertise, and creating mutually beneficial opportunities for collaborative research and other consultancy services. They may also enrich the learning experience offered to students by providing real-life applications of academic expertise and/or opening up of placements or internships for our students. The College shall therefore ensure that:

a) Academic staffs have the right to engage in consultancy services. All consultancies undertaken by its employees, whether college-based or private, are disclosed; and, where it is a College consultancy, that it is formally approved;
b) All consultancy services shall be coordinated through the Heads of schools/departments and the DRC;
c) The RGO shall document all consultancy services and manage the consultancy fees allocated to the College, its departments, and individual staff;

CHAPTER TWO:

2.0 STRATEGIES TO ADVANCE RESEARCH CAPACITY

2.1 University Research Fund (URF) to Promote Research Activity and Delivery
- The KCMUCo has established University fund for research
- The focus is to ensure steady flow of resources for research facilitation. The research resources may include accruing tuition and gifts as well as significant funding from external research sponsors/donors. The college shall strive to sustain the URF so that it can financially support research competitively by provision of short and long term research and fellowship grants. The college schedule and procedure for the award of such research grants shall be followed.
- The URF supports research that is aligned closely with University strategic priorities. The general principle governing the allocation of all research funding in the University is that it should be seen as an investment that will maximise the range of outcomes that the University expects to result from staff and student research as outlined in the College's Strategic objectives.
- Part of the URF supports young researchers and is allocated by Research and Publications Committee.
- Academic leave or Sabbatical leave is allocated by the DPAA through the RGO. Academic staffs are eligible to apply for leave and financial support for the intended academic activities.

2.2 Build and Efficiently Utilize Human Resources
- KCMUCo to devise strategies to exploit capacity building and training programs to enhance and accelerate institutional research activities.
- This policy advocates for provision of opportunities to increase the research capacity of schools/institutes centres, departments and individuals to conduct research in relevant fields and to develop and deliver new concepts and technologies.
- The opportunities such as post-graduate training, exchange programmes and short-term post-doctoral training programs have been very successful in accelerating research activities at KCMUCo. The Directorate of Postgraduate Studies (DPS) and the Program coordinators at the University are responsible in determining the research delivery needs. Major avenues of consideration will include:
  - Proactive approach to seek fellowship/donor support for postgraduate training rather than reliance on one source;
  - Enabling compilation of information database on postgraduate training programs and output at the University.
  - Coordination and organization of postgraduate and academic research exhibitors, conferences, workshops and seminars.

2.3 Prioritize Strategic Institutional Research for National Innovation Systems

o In order to achieve the policy strategic objectives, there is need to identify and prioritize strategic institutional innovation systems. Therefore, the University will facilitate, host and conduct research activities, provided that the research is relevant to needed services and capacity building and training opportunities for national and research innovation systems. The main focus of the research activity will be on improving the healthcare, productivity and sustainability of Tanzania's development.

2.4 Improve Industry - Academic Research Interface with Appropriate Incentives

o The pressure of international competition, increased diffusion of information and communication, declining public funding of R&D have facilitated the enlarging of private industry engagement/investment in R&D. In this policy the partnership of the University research units with private sector will be encouraged.

2.5 Development of Appropriate Research Management Systems: Building Capacity for Research Development and Implementation

KCMUCo has established a research grants office (RGO). The objectives of the office are:

o Providing support for research policy formulation and strategic planning;

o Providing support service for the administration of internal and external research grants schemes, including funding allocation, monitoring research progress and expenditures, and evaluation of results;

o Acting as a focal point for internal and external research information dissemination and external liaison;

o Developing and maintaining a central database for research activities;

o Supporting services for University Research Centre funding allocation and progress monitoring;

o Providing secretarial support to the University Research and Grants Committee/Office (RGO) and other Working Groups, evaluating research proposal for funding.

o To improve funding for research and innovations

2.6 To Improve Research Management and Knowledge sharing **Culture at KCMUCo**

Research information management, communication and knowledge sharing has been limited due to a number of factors which include:

o Lack of information resource centre/service

o Limited University-wide research conferences, workshops and public seminars;

o Limited communication through publishing of research activities and outcome in Annual Reports or university based specialty Journals.

To address shortcomings in communication and enhance research communication and information sharing, the DRC, DPS offices and various programmes will do the following:

o   Establish a structured and objective information delivery system and network to enhance research activity and information sharing.
o   Continue to coordinate and organize a University-wide or college based research conferences and make outcome publications available online and on print.
o   Facilitate, host and coordinate thematic regional and international conferences.
o   Provide opportunity for postgraduate students to share research findings through conferences, workshops and seminars.
o   Integration of the available Research Management module in all postgraduate programmes at KCMUCo
o   Improve gender responsiveness of the University through research and innovations.
o   Revive the Publications committee under the DRC

2.7 Commercialization of Products

o   As owner of intellectual property, the University shall have the exclusive right to commercially exploit any Work or Derivative Work(s) created with "substantial University assistance." If the University has declined to exercise its right, it will assign ownership of the Rights in the Work to the Creator(s), and the Creator(s) may proceed to commercially exploit and pursue other opportunities, provided that University shall retain its right to reimbursement of expenses and royalty rights.
o   KCMUCo shall have, in its reasonable discretion, the rights to veto any proposed third party commercial exploitation of any such work, if such arrangement would materially prejudice the University's reputation, goodwill, or competitive interests.
o   Sharing of Intellectual Property Income shall be determined by the Intellectual Property Policy of the KCMUCo.

2.8 Improved ICT Capacity to Enhance Research Output

The DRC in collaboration with the University ICT team will assist in:
o   Publishing of University research outputs online
o   Providing access to research information
o   Building database and programs for ongoing research management
o   Management of all KCMUCo courses through the LCMS+
o   Sustainability of ICT facilities
o   Innovation and development of new programs/courses
o   Development of Stand-alone ICT policy, strategic plan

CHAPTER THREE

3.0 POLICY IMPLEMENTATION STRATEGY

3.1 Structural Recommendations of the Policy

In the current structure of the University (Charter 2010, Article 17 (b)), the direct responsibility for research falls under the office of the DPAA, who is responsible to the Provost. The research, innovation and consultancies policy is a statutory requirement.

3.2 Strategic Assumptions of the Research Policy

The following strategic assumptions guide the development of this research policy:
- o The office of DPAA and DRC will oversee the research vision, mission and core values of the University.
- o The policy will improve the quality and quantity of research being carried out at the KCMUCo.
- o The success / failure of the research policy will be measured through changes in the research productivity of KCMUCo's academic staff and students.
- o Research productivity is a function of the following indicators:
    - o Number / proportion of staff members engaged in research;
    - o The number of research projects;
    - o The output, namely: research degrees, publications, patents and citations;
    - o The inputs, namely: types and size of funding, facilities, human resources and time.
- o The functional organs of the University, namely; departments, faculties, institute/s, directorates and central administration will influence research productivity by successfully carrying out the roles and responsibilities identified in this policy.

3.3 Research Policy Implementation Structure

Each of these general policy areas should aim at implementing the policies that develop research human resources (academic staff) from undergraduate students to postdoctoral trainees, to researchers and finally to research mentors. The organs of the University that will implement these policies are the departments, the faculty, institute, the Governing Board of the College– through the office of a DRC and DPS and the Academic Board.

3.4 Research Career Development Framework

Growing external pressures have forced Universities and Colleges to ask faculty to continually increase their levels of productivity with the same or fewer resources. These pressures include decreased revenues and funding along with calls from government for greater outcome-based accountability, increasing pressure from industry for market-driven innovations, growing competition for domestic and international students, growing diversity

in online and distance education, and mounting societal demands for higher education to cultivate both significant research advances and a liberally-educated citizenry.

It is in this larger context that the KCMUCo, wishing to facilitate the vitality and productivity of its full-time and part-time faculty members, conducted comprehensive self-assessment to:

- Identify individual, institutional, and leadership areas in which the college is strong, and ones in which it needed improvement;
- Identify strategies for addressing weak areas; and
- Provide a baseline against which to measure the impact of any efforts initiated to increase faculty vitality and productivity.

The college's research and innovations policy aim to facilitate the development of research careers, assuming that researchers will become increasingly productive and useful for the fulfilment of the research objectives of the KCMUCo as they grow in seniority.

- o The DRC will monitor School/department's performance against their research plans on the basis of agreed criteria and will advise the DRC on the outcome of this process.
- o The research performance of individual staff is monitored and evaluated as part of the staff development planning process (staff appraisal guidelines).
- o Staffs are required to supply full and accurate details of their research outputs on an annual basis to their Head of School/department who will supply the information to the DRC and DPS.
- o The DRC will publish an annual list of staff and student publications.
- o When new academic staffs are recruited, their research record or potential must have a high priority during the appointments process. Responsibility for oversight of this rests with the DPAA (through DRC and DPS).
- o Heads of School/departments should ensure that newly appointed staff are familiar with research evaluations, research training and funding opportunities and the importance of publishing in peer review journals.

3.5 Balanced Workload for Academic Staff

- o In order to fulfil the mission and vision of the KCMUCo, it is expected that staff members will balance their time between activities that contribute towards each of the mission areas of the university. The University College has maintained an acceptable staff-student ratio of less than 1:25 as required by Tanzania Commission for Universities (TCU) so that faculty and researchers can appropriately shoulder their multitasks.
- o Heads of School/departments are required to consider workload issues in the distribution of supervisory responsibilities before approving enrolment proposals by postgraduate research students.

3.6 Challenges for the Implementation of Research Agenda

The College has the following strengths:
- o The best health research laboratories in Northern Tanzania
- o A number of collaborative research projects with leading researchers
- o KCMUCo hosts a number of collaborative research and initiatives
- o Availability of fast internet and ICT services (fibre optic connection)
- o Availability of animal house and experimental huts for entomology studies
- o Availability of field stations and research clinics

However, despite the strengths that KCMUCo has there are some challenges that in may have impact on the implementation of this research agenda. These include:

• **Uncertainties of obtaining adequate resources:** Successful implementation of this research agenda will depend on the availability of adequate financial and human resources and also adequate infrastructure to host the different research, development and innovation activities. However, research at KCMUCo is largely donor-funded.

The implementation of the proposed research agenda requires adequate and well trained human resources, with new skills and expertise. A priority is needed in recruiting additional staff and the availability of adequate financial resources to train them in respective research, technologies and innovation skills. Appropriate incentives will minimize labour migration in both within and outside of the country.

• **Inadequate research facilities:** In an ideal situation each academic staff is supposed to have sufficient space for research and teaching demonstrations/practicals. The well-equipped wet laboratories hosts shared teaching facilities but little research facilities. Having a shared research laboratory is cost-effective in that it allows access by many and at the same time, makes it easy to service and validate the equipment. In addition it avoids unnecessary wastage of funds through duplications. The expansion and proper management of the Biotechnology laboratory resources should be prioritized. This should policies that will facilitate better access and utilisation of these laboratories by staff and students.

• **Inadequate capacity for maintenance of research equipment:**
The University uses maintenance contracts with institutions outside the country which are expensive and time consuming. Having staff trained for maintenance of laboratory equipment will minimize maintenance costs. However, external validation with reference laboratories remains to be costly, and therefore sharing of equipment will minimize these costs on individual grants/projects and validation costs can be shared.

CHAPTER FOUR

4.0 THE RESEARCH FUNCTIONS AND GOVERNANCE
4.1 Requirements to Undertake Research

a) All academic staffs have the right and are required to conduct research and to publish their findings.
b) All academic staffs have the right to and should, where appropriate, seek research funds in support of their research including collaborative and contractual research funding.
c) The requirement to undertake research is a career expectation and will be balanced as appropriate with the other obligations of academic staff including significant administrative responsibilities.
d) Academic staff research output will be evaluated as a requirement and as stipulated in staff appraisal procedures and policy.

4.2 Creating an Enabling, Transparent and Efficient Environment for Research and Innovations

o The generation of new knowledge (through research) directly influences curriculum development and teaching. Research provides the raw materials for efficient and stimulating classroom interaction; it puts the teacher on the cutting edge of new knowledge.
o In order to continue to play the key function of research, KCMUCo commits itself to establishing, maintaining, and protecting an enabling research environment that promotes innovation, production, domestication and stimulating exchange of ideas within the University community and with the outside world.

4.3 Postgraduate Student Research

a) The College acknowledges that Postgraduate research students make a vital contribution to the research environment and output of the University.
b) Heads of School/Departments/DPS are responsible for ensuring that the management of postgraduate research degrees complies with University policy.
c) DPAA and DPS are responsible for ensuring that postgraduate programmes make appropriate budgetary provision for the support of postgraduate student research.
d) Programme coordinators and funding agencies are responsible for ensuring that students under their programmes have sufficient funds for research and are assigned supervisors based on criteria set by DPS office.

4.4 Research Overheads

    a) Except for projects awarded under the URF, all externally funded research shall pay overheads to the KCMUCo based on fixed rates that will be reviewed from time to time.

    b) Unless otherwise stated, the overheads payable to the College for management and administrative support shall be 20% of the grant (indirect costs).

4.5 Policy Guidelines

KCMUCo is under transformation to become full-fledged university. The Policies under section 1.5 of this document will be developed in due course. A draft of the Consultancy policy is under review.

CHAPTER FIVE

5.0 MISCELLANEOUS

5.1 Review of the Research Policy

This research policy will be reviewed on regular basis to accommodate demands arising from advancement in science and technology. Under normal circumstances the policy will be reviewed every three years.

5.2 Legislative Obligation

The University will strive to implement this policy in line with national and international research guidelines and policies. All researchers and collaborators are required to abide to this policy to the best of their ability.

5.3 BIBLIOGRAPHY

1) College Research and Ethics Review Committee (CRERC) Standard Operating Procedures
2) KCMUCo's Strategic Plan 2011 to 2015
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5) Muhimbili University of Health & Allied Sciences (MUHAS), Research Agenda, June 2011
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7) Ministry of Communication, Science and technology, the National Research and Development Policy, 2010
8) National Institute for Medical Research (NIMR), National Health Research Priorities
9) Tumaini University Charter of Incorporation, May 2009
10) University of Nairobi, Research Policy, June 2008

Notification

Date of Commencement: ……………………………..