MRC Clinical Cancer Research Centres

Request for Applications (RFA)

MRC-RFA-CCRC-01-2014

23 June 2014
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1. **INTRODUCTION**

The MRC is establishing Clinical Cancer Research Centres (CCRCs) at medical schools and/or hospitals in South Africa. The explicit aim of such CCRCs will be to integrate cancer-related research programmes in fields such as basic laboratory and clinical sciences, prevention and control methodologies, and population-based studies, into a transdisciplinary cancer research centre that may straddle departmental and institutional boundaries.

The causes of death related to cancer in South Africa in 2000 are shown in Table 1 below. (Revised Burden of Disease estimates for the Comparative Risk Factor Assessment for South Africa, 2000). Lung cancer is the leading cause of cancer in SA accounting for 17% of all cancer deaths. This is followed by oesophageal cancer which accounts for 13%, cervical cancer accounting for 8%, breast cancer accounting for 8% and liver cancer which accounts for 6% of all cancer deaths. Many more males suffer from lung and oesophageal cancer than females.

Recent estimates by the International Agency for Research on Cancer indicate that almost 40,000 deaths from cancer (58,000 cases) occur in South Africa every year, with substantial heterogeneity in cancer distribution between population groups. In men, the leading causes of deaths were lung cancer (comprising 13% of all cancer deaths), Kaposi’s sarcoma (11%), and oesophageal cancer (11%). In women, the three leading causes of death were cancer of the cervix (20%), breast (15%), and Kaposi’s sarcoma (6%).

**Table 1: Percentage of cancer deaths by cause, South Africa 2000**

<table>
<thead>
<tr>
<th>Persons</th>
<th>Males</th>
<th>Females</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rank</td>
<td>Cause of death</td>
<td>%</td>
</tr>
<tr>
<td>1</td>
<td>Trachea/bronchi/lung cancer</td>
<td>16.5</td>
</tr>
<tr>
<td>2</td>
<td>Oesophageal cancer</td>
<td>13.4</td>
</tr>
<tr>
<td>3</td>
<td>Cervix cancer</td>
<td>8.4</td>
</tr>
<tr>
<td>4</td>
<td>Breast cancer</td>
<td>7.7</td>
</tr>
<tr>
<td>5</td>
<td>Liver cancer</td>
<td>6.4</td>
</tr>
<tr>
<td>6</td>
<td>Colo-rectal cancer</td>
<td>6.2</td>
</tr>
<tr>
<td>7</td>
<td>Prostate cancer</td>
<td>6.1</td>
</tr>
<tr>
<td>8</td>
<td>Stomach cancer</td>
<td>5.6</td>
</tr>
<tr>
<td>9</td>
<td>Pancreas cancer</td>
<td>3.7</td>
</tr>
<tr>
<td>10</td>
<td>Leukaemia</td>
<td>3.5</td>
</tr>
<tr>
<td>11</td>
<td>Mouth and oropharynx cancer</td>
<td>3.3</td>
</tr>
<tr>
<td>12</td>
<td>Lymphoma</td>
<td>2.5</td>
</tr>
<tr>
<td>13</td>
<td>Larynx cancer</td>
<td>1.8</td>
</tr>
<tr>
<td>14</td>
<td>Bone and connective tissue cancer</td>
<td>1.7</td>
</tr>
<tr>
<td>15</td>
<td>Ovary cancer</td>
<td>1.7</td>
</tr>
</tbody>
</table>

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To address this cancer-related burden of disease in South Africa, the MRC proposed the establishment of CCRCs to develop and support multi-disciplinary groups of researchers to undertake high quality cancer research in South Africa.

3. ELIGIBILITY FOR MRC CLINICAL CANCER RESEARCH CENTRES

Any institution approved by the Minister of Science and Technology for NRF funding is eligible to apply. Further, registered South African not-for profit research organisations are eligible to apply. For-profit institutions are not eligible. MRC intramural research units are not eligible but intramural MRC researchers may participate in applications led by an extramural Principal Investigator. Principal Investigators must be South African citizens.

Only groups actively involved in cancer research in SA should consider applying to become a MRC CCRC. A CCRC will comprise an established group of scientists who have a track record of scientific contributions in cancer research. The group should have recent research experience in any of the following disciplines: basic laboratory science, clinical research, socio-behavioural sciences, epidemiology, public health research and/or implementation science. Expertise and capabilities in basic and discovery science, translational science and surveillance would be advantageous.

The application for a CCRC will be led by a well-established Principal Investigator (designated as the Centre Director), who is expected to have a MBChB and/or PhD. Preference will be given to Clinical Oncologists who run a clinical service managing cancer patients. The Principal Investigator is expected to be an internationally recognised leader in his/her field of cancer research. Further, (s)he must have strong scientific leadership skills and an ability to work across disciplines. The Principal Investigator’s 10 most cited publications must be provided in a table in the application – listing each paper as a Vancouver-style reference (authors, title, journal, year, volume and page numbers) with the total number of citations as indicated in Scopus. Further, the full CV listing a May 2014 Scopus H-index should be included as an appendix in the application.

Since this is a Centre application, the Principal Investigator must be supported by at least three other senior scientists, who may or may not be clinicians. The Principal Investigator and the (at least) 3 senior scientists must provide evidence of past collaboration and joint research. Note that the 3 (at least) senior scientists comprising the senior team of the CCRC do not have to be from the same institution or the same country. The application for a CCRC must provide detailed evidence of the group’s (PI plus at least 3 senior scientists) high impact research, including evidence, if any, of their research impacting policy and/or practice in cancer.
An organisation may submit no more than one application as the host institution of a Principal Investigator, in response to this RFA. The Principal Investigator may not participate in more than one application.

The vision and mission of the CCRC and the objectives of its research programmes must demonstrate a clearly defined focus within the field of cancer. For example, the CCRC could focus on lung cancer or on all haematological cancers or on cancers due to infectious agents, etc. The focus of the CCRC should preferably include at least one of the 10 most common cancers listed in the table above. The physical facilities, patient profiles and laboratory resources for the conduct of the proposed CCRC’s research programme should illustrate the CCRC’s comparative advantages in taking up its proposed research focus.

The CCRCs are expected to attract young researchers with potential alongside more established researchers and to offer masters and doctoral students research opportunities for their theses. The CCRCs are also expected to have an impact on the field through the development of future research leaders in their specialist cancer research areas. The CCRC should be a formal component of the host institution with sufficient space, positions, and resources to ensure the Centre’s sustainability and fulfil the Centre’s objectives.

3. **KEY ACTIVITIES AND SCOPE OF RESEARCH OF CCRCs**

   The key activities of CCRCs should include:

   - scientific programmes to promote the most innovative, cutting edge and impactful research in the CCRC’s selected focus cancer research area;
   - a set of research projects that cover study of cancer epidemiology, treatment and prevention. At the minimum the proposed CCRC should include studies that address at least these 3 aspects of cancer research. Research on diagnostics, pathogenesis and impact of interventions are encouraged but are not essential for this RFA;
   - the establishment of a patient database covering at least the cancers in the selected research focus area. This database should enable the long-term study of cancer progression, treatment outcomes and the epidemiology of the selected cancers. The database should also be a resource to identify patients in the event of future therapeutic and prevention research and clinical trials.
   - the establishment of a repository/biobank of biological specimens collected from patients in the database. These specimens should be collected with the appropriate patient consent, processed and curated for long-term storage.
   - contributing to post-graduate training and mentoring of post-graduate students and post-doctoral fellows;
   - translation of research discoveries into clinical advances in diagnosis, prevention, control and treatment;
4. APPLICATION SCHEDULE

The timelines for the application process are shown in Table 2.

Table 2. Application timelines

<table>
<thead>
<tr>
<th>Stages</th>
<th>Date/period</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Publication of RFA</td>
<td>23 June 2014</td>
</tr>
<tr>
<td>2. Application submission deadline</td>
<td>31 August 2014</td>
</tr>
<tr>
<td>3. Evaluation period (indicative)</td>
<td>September - October 2014</td>
</tr>
<tr>
<td>4. Results of the evaluation - notification letter (indicative)</td>
<td>October/November 2014</td>
</tr>
</tbody>
</table>

5. FUNDING

The MRC plans to fund up to 4 CCRCs. Each successful applicant will be designated as a “MRC Clinical Cancer Research Centre” and will receive a 5 year grant. The maximum budget allowed in year 1 is R3 million with 5% escalation each year thereafter. Over and above this 5 year grant, the CCRCs will be eligible to apply for specific funding that addresses priority areas of cancer research as inter-centre collaborative projects. It is anticipated that this protocol specific funding will be available in 2015, for multidisciplinary, large scale, collaborative cancer projects over three to five years.

6. APPLICATION GUIDELINES

All applications must be approved by the relevant institutional authority (usually the Deputy Vice Chancellor: Research) of the host institution that submits the application.

The call for applications will open on 23 June 2014 and close on 31 August 2014. All applications must be made on the MRC CCRC application form available online or obtainable from the administrator, Ms Arlene Smith (arlene.smith@mrc.ac.za). The length of the application should not exceed 20 single spaced A4 pages, excluding annexures. The font in the application should be 11pt Arial. The application must include the sections set out below.

- PROPOSED NAME OF CENTRE AND HOST INSTITUTION

- PROPOSED PRINCIPAL INVESTIGATOR (CCRC DIRECTOR)

  Provide a detailed description of the Principal Investigator’s scientific standing in the field of cancer. (Include a table of his/her 10 most cited journal articles in cancer). Describe the Principal Investigator’s leadership and administrative capabilities to show that (s)he has the skills and/or experience to manage the CCRC successfully.

- PROPOSED RESEARCH TEAM

  Provide a description of the senior scientists (at least 3) who will make up the CCRC and their scientific contributions in cancer research. Provide a detailed description of the scientific contributions made by the applying group to date in cancer research. Provide a detailed track
record of the publications and policy/practice impact of the research, if any, conducted by this group in the past.

- BACKGROUND

The description of the proposed research should include

- a description of the cancer research area(s) that will be the focus of the proposed Centre; and
- the nature, source, extent and impact of the research/challenge to be addressed in the broad global and national context, giving particular attention to the extent of the research/challenge in South Africa.

- SCIENTIFIC RATIONALE

The background provided must include information on

- the scientific rationale for the proposed research and how the proposed research will address the research/challenge identified above; and
- the mechanism by which the proposed research is expected to contribute to an integrated, cross-disciplinary research programme advancing cancer-relevant knowledge, and/or contribute to improvements in health outcomes.

- RESEARCH AIMS/OBJECTIVES

The main aim(s) of the proposed research and the research objectives that are to be achieved.

- OUTLINE OF RESEARCH ACTIVITIES OVER THE NEXT 5 YEARS

An account of the overall research approach, and

- specifics of the research plan, including any multi-disciplinary aspects;
- the research methods and/or experimental techniques to be employed, including human participants protection plan for clinical studies; and
- the data collection and analysis strategies/approaches to be adopted.

The research plan and methods should be well aligned with the stated research aims and objectives. Note that the research plan needs to include a project(s) that study epidemiology, treatment and prevention of the cancer(s) that constitute the focus on the proposed CCRC.
- AVAILABLE RESEARCH INFRASTRUCTURE

Describe access to infrastructure, laboratory resources, at-risk and patient populations, databases, biobanks and other unique technologies.

- CAPACITY DEVELOPMENT PLAN

Details of the capacity development plans for

- postgraduate students and post-doctoral staff; and
- staff/student exchange programme, if applicable.

- EXPECTED OUTPUTS/OUTCOMES/

This section is to include an outline of the expected direct and/or indirect outputs/outcomes/ of the research in terms of the Centre’s mandate. These outputs/outcomes/impact will include

- the advancement of scientific/health knowledge related to cancer;
- knowledge generation to improve South Africa’s scientific competitiveness on the world stage;
- the development of research infrastructure to conduct cutting edge, world class cancer research;
- human capacity development (number of post graduates trained and post-docs mentored);
- specific research outputs (e.g. publications in journals);
- new intellectual property, products, processes, policies and practices developed; and
- contributions the research is envisaged to make to improvements in health outcomes.

- IMPACT OF RESEARCH

A description of the potential impact of the proposed research programme.

- BUDGET

The funding cap for the CCRCs in year one is R3 million. An escalation of 5% per annum is permitted. A detailed budget with justification for the first 5 years of the Centre must be provided in a Microsoft Excel format spreadsheet. The budget should include items for operating expenses, capital expenditure and staff.
Allowable costs include

- Personnel. *Please note only fixed-term contract research staff and research support staff is an allowable cost. Researchers who are on the host institution’s payroll as permanent staff members may not claim salary reimbursement from this grant.*
- Equipment. *Partial or full support for the cost of equipment may be requested but must not exceed 10% of the annual budget.*
- Supplies.
- Other research costs (specify).

Non-allowable costs include

- Indirect costs. *Indirect costs will not be funded.*
- Purchase or construction of a building.
- Rental costs for space that is owned by the institution.
- Recruitment costs for staff.
- Purchase of office furniture.

- ATTACHMENTS

Attachments to the application must include

1. The full CV of the Director, including his/her current H-index from Scopus
2. A brief biosketch (2 page NIH format biosketch) of the senior scientists and any other key researchers; and
3. A letter of support from the host institution (the letter should give an indication of the infrastructure and resources that will be provided to the Centre).

7. INSTITUTIONAL RESPONSIBILITY

The Institutional Research Office (or equivalent) of each submitting institution is required to ensure completeness of applications, and approve and authorise all applications submitted. Note that an institution may only submit one application as Host institution of the Principal Investigator.

8. EVALUATION PROCESS

There will be a two-step review and evaluation process:

1. internal MRC screening for responsiveness to all the specified administrative and procedural provisions required in the RFA; and
2. peer-review to assess the scientific merit (and other review criteria as specified below) of applications found to be responsive to the RFA provisions.
8.1 Internal screening
All applications will be screened by the MRC for completeness and responsiveness to the goals of the RFA and its administrative requirements/provisions. If the application is found to be incomplete or unresponsive to the provisions described in the RFA, the application will be returned to the institution without further review.

8.2 Peer-review and selection of qualifying applications
A peer review and selection committee consisting of independent cancer research experts will review all applications and provide an assessment of the scientific merit of each application and a funding recommendation to the MRC for its consideration.

8.3 Rating of applications
Reviewers will consider each of the review criteria below in the determination of scientific, innovative, technical, and administrative merit.

Scientific stature of the PI (Director). Does the Director have a good track record in cancer research excellence and leadership? Is the Director experienced and well suited for the research envisaged? Does the Director have a good record of scientific publications (no. of publications, no. of citations, publications in high impact journals, authorship position, etc.)? Is the Director recognised both nationally and internationally for his/her achievements?

Proposed research team. Are the Centre investigators, collaborators, and other researchers well suited to the research envisaged? If they are Early Stage Investigators or New Investigators, or in the early stages of independent careers, do they have appropriate training and mentorship? If established, have they demonstrated an ongoing record of accomplishments that have advanced their field(s)? Capacity development plans for postgraduate students and post-doctoral staff and staff/student exchange programme, outreach programme, if applicable?

Proposed research focus and strategy. Does the proposed research address an important cancer priority in SA or a critical barrier to progress in the field? If the aims of the Centre are achieved, how will scientific knowledge, technical capability, and/or clinical practice be improved? How will successful completion of the Centre’s research projects change the concepts, methods, technologies, treatments, services, or preventative interventions that drive this field? Are the overall research strategy, methodology, and analyses well-reasoned and appropriate to accomplish the specific aims of the Centre? If the Centre is in the early stages of development, will the strategy establish feasibility and will particularly risky aspects be managed? If the research involves clinical research, are the plans for the protection of human participants from research risks adequate? Is there a clear plan for a database of patients and a biobank? Innovation. Does the application challenge and seek to shift current research or clinical practice paradigms by utilizing novel theoretical concepts, approaches or methodologies, instrumentation, or interventions? Are the concepts, approaches or methodologies, instrumentation, or interventions novel to one field of research or novel in a broad sense? Is a refinement, improvement, or new application of theoretical concepts, approaches or methodologies, instrumentation, or interventions proposed?

Research infrastructure. Will the scientific environment in which the research will be done contribute to the probability of success? Is the institutional support, equipment and other physical resources available to the investigators adequate for the research/research projects proposed? Will
the Centre benefit from unique features of the scientific environment, subject populations, or collaborative arrangements?

9. GRANT PAYMENTS
Grants will be paid to the host institution in quarterly payments and on receipt of a tax invoice from the host institution.

10. RESPONSIBILITIES OF THE UNIT DIRECTOR

10.1 Reporting
All Directors must submit annual reports from the year of receipt of the grant. Reports must be completed on the template provided by the MRC.

10.2 Scientific compliance

10.2.1 Ethics
All Directors are required to maintain the highest ethical and safety standards in conducting the research, particularly when human and animal participants are involved. It is the responsibility of the Director to comply with all relevant regulations in this regard, including those of the institution at which the research is carried out.

10.2.2 Intellectual Property Rights
Funding by the MRC is subject to the provisions of the Intellectual Property Rights from Publicly Financed Research and Development Act 51 of 2008. Further, the MRC requires that intellectual property is managed in a manner that ensures “Global Access”. Global Access requires that (a) the knowledge and information gained from funded projects be promptly and broadly disseminated, subject to intellectual property protection, where appropriate; and (b) that the intellectual property be made available and accessible at an affordable price to people most in need within developing countries.

11. IMPORTANT INFORMATION
Please take note of the following important information.

i. Each institution may only submit one application.
ii. The MRC will utilise the results of the peer review to determine which meritorious applications receive funding. The MRC may also consider additional factors such as geographical distribution of centres supported in making its final determinations.
iii. The MRC may use text, video or other visual representation submitted by applicants on the MRC website or on MRC materials for publicity and/or public awareness.
iv. The MRC will provide written summaries of the review findings for those applications found responsive and submitted to the review process. Note that reviewers’ names will not be shared with the applicants, and that the decision of the MRC is final.
v. The MRC CCRC status and support shall be terminated should the research conducted at the Centre breach the regulations that apply to research integrity or research ethics or any regulatory, legislative and institutional guidelines governing research.
vi. The MRC must be acknowledged as an affiliated institution in all publications produced by the Centre.

vii. CCRCs are required to carry the MRC name as follows: South African Medical Research Council/[Name of University/Research Institution] [Name of CCRC]. This may be shortened to MRC/[Abbreviated Name of University/Research Institution] [Name of CCRC]. Researchers in the CCRC are required to include this CCRC name as part of their affiliation in all publications emanating from the Centre.

CONTACT DETAILS

Please direct your requests for information and questions/queries to:

Dr Niresh Bhagwandin  
Strategic Research Initiatives  
MRC  
Phone: (021) 938 0652  
email: niresh.bhagwandin@mrc.ac.za

Ms Arlene Smith  
Strategic Research Initiatives  
MRC  
Phone: (021) 938 0653  
email: arlene.smith@mrc.ac.za

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