



ERICA-SA

EVOLVING RISK FACTORS FOR CANCERS IN AFRICAN POPULATIONS

RECRUITMENT FOR DOCTORAL BURSARIES AND POST-DOCTORAL RESEARCH FELLOWS 2018

EVOLVING RISK FACTORS FOR CANCERS IN AFRICAN POPULATIONS (ERICA-SA): LIFESTYLE, INFECTION, GENETIC SUSCEPTIBILITY AND CANCER IN SOUTH AFRICA DEVELOPMENT OF RESEARCH CAPACITY AND AN EVIDENCE BASE FOR CANCER CONTROL

The ERICA-SA project has received funding from the Grants, Innovation and Product Development (GIPD) Unit of the South African Medical Research Council (SAMRC), with support from the South African National Department of Health and the UK Medical Research Council (MRC) from the UK Government's Newton Fund. ERICA-SA will utilise lifestyle data and biological samples collected by the Johannesburg Cancer Study (JCS) from 20,000 African cancer patients to investigate the causes of cancer and to enhance scientific research capacity in South Africa. This will be the largest study of its kind in Africa.

ERICA-SA will support three PhD students and two Postdoctoral fellows with a background in genetics, microbiology, epidemiology, bioinformatics or biostatistics to work with an international team of geneticists, infectious disease specialists and epidemiologists from the SAMRC, the NHLS National Cancer Registry, the Sydney Brenner Institute for Molecular Bioscience (SBIMB) at WITS, King's College London, the University of Cambridge, the German Cancer Research Centre in Germany, the MRC AIDS Virus Research Centre in Uganda, and the University of Sydney, Australia. The ERICA-SA team will analyse biological samples using genome-wide scans to identify susceptibility loci for breast, cervical and oesophageal cancer, analyse epidemiological data to investigate lifestyle risk factors over a range of cancer types, and use multiplex serotyping to screen for serological markers from over 20 cancer causing infectious agents.

Successful doctoral candidates will be registered for a PhD degree at the Universities of Cape Town, Stellenbosch or Witwatersrand, and will be based at the SAMRC in Tygerberg, the SBIMB at WITS, or the National Cancer Registry in Sandringham, Johannesburg. Pre-doctoral and postdoctoral candidates must be willing to travel for skills development and supervision, and to work with an experienced international supervisory team, based in laboratories in London and Cambridge (UK), Heidelberg (Germany), Kampala (Uganda) and Sydney, Australia.

TOPICS FOR PROJECTS

All topics will be agreed upon with the potential candidates and the ERICA-SA team. The three broad areas of research will be as follows.

1. Genetic susceptibility to common African cancers:

The project will investigate the contribution of inherited genetic variants to the development of breast, cervical and oesophageal cancer. Over 6000 DNA samples will be genotyped for about 2.5 million genetic variants (single nucleotide polymorphisms or SNPs) and the frequency of each marker in each cancer type compared with their frequencies in 6000 controls. The aim is to identify genes and genetic variants that alter cancer risk.

2. Lifestyle risk factors in a broad range of cancer types:

This research area will focus on measuring the effect of key exposures that are common and which may lead to cancer, such as smoking, snuff and indoor pollution, alcohol, and hormonal factors. Examination of links with genetic data to investigate potential gene x environmental interactions will be especially encouraged.

3. Infectious agents in cancer:

The contribution of infections known to cause cancer, such as HIV, Hepatitis B/C, Helicobacter pylori, Human papillomaviruses, Epstein Barr Virus, Kaposi sarcoma-associated herpesvirus and certain polyomaviruses will be measured in about 17,000 serum samples from a wide variety of cancer types. This is a unique opportunity to investigate the role of infection in African cancer on a large and broad scale.

SUBMITTING YOUR APPLICATION:

Potential candidates are required to send the following information to Noluntu.Funani@mrc.ac.za

- Curriculum Vitae (maximum 4 pages).
- A cover letter (maximum 2 pages) indicating how your knowledge and skills would align to the research topic and what your expectations are should you be successful.
- Contact details for three potential academic referees.

ENQUIRIES:

Dr Elvira Singh: Elvira.Singh@nioh.nhls.ac.za | Professor Debbie Bradshaw: Debbie.bradshaw@mrc.ac.za
Professor Chris Mathew: christopher.mathew@kcl.ac.uk

Deadline: **30 September 2017**, although applications will also be considered beyond this if suitable candidates have not been identified.

The grant-holders reserve the right not to make an appointment if suitable candidates are not identified.

