

**Aga Khan University
Medical College in East Africa
Cardiology Fellowship Program**

Preamble

The Aga Khan University is a premier teaching and referral hospital offering tertiary care in an array of disciplines including surgery, medicine and clinical diagnostics. The university is committed to being a leader in the training and development of health care professionals in the East African region and has several residency programs in place to facilitate this objective.

The Aga Khan University Hospital Nairobi is the first in the region to introduce cardiology fellowship training. The program started in 2017 and is recognized by the Kenya Medical Practitioners and Dentists Council (KMPDC).

About the Program

The Cardiology Fellowship program falls under the Department of Medicine, in the Division of Cardiology. The program offers training in adult cardiology with specific objectives and a large complement of training experiences designed to enable the trainee to meet these objectives. The program is committed to the training of excellent cardiologists who are well equipped to provide contemporary cardiovascular specialist service in the developing world and beyond. The program is committed to fostering the career goals of the trainees across the broad spectrum of opportunities available in the specialty; either in clinical cardiology and/or as clinician scientists.

Highlights of the program

Highlights of the Cardiology Fellowship program include:

1. Unique, World-Class Facility

The Aga Khan University Heart and Cancer Center has state-of-the-art diagnostic and interventional equipment which greatly assists in addressing patient needs. This unit houses the only cardiac care unit (CCU) in the region, an ICU that are fully equipped.

2. High Academic Standards

The post graduate medical education programs are rigorous with subspecialty preparation examinations for all trainees with written and oral practice examinations

3. Dedicated and comprehensive educational rounds:

- Core Curriculum in adult cardiology
- Bedside Physical Examination
- Hemodynamics
- Angiography and Interventional Cardiology

- Advanced Cardiac Imaging
- Electro-cardiograms and Electrophysiology
- Critical Care Unit
- Journal Clubs
- Research Rounds
- Medical education
- Hospital Grand Rounds

4. Fully developed rotations with experienced attending staff in following areas:

- Coronary Care And Cardiac Intensive Care Unit
 - Hemodynamic Monitoring, Mechanical Ventilation and Intra-Aortic Balloon Counterpulsation
- Consultation Service
- Inpatient General Cardiology
- Echocardiography
 - *M-Mode, 2D, Doppler & Color Flow Mapping, Trans-Esophageal Echocardiograms, Contrast Echocardiography & Stress Echocardiography*
- Advanced Cardiac Imaging
 - *Cardiac MRI and CT*
- Exercise Stress Testing and Nuclear Cardiology
- Electrophysiology
 - *ECGs, Ambulatory Monitoring, Pacemakers and Invasive EP Studies & Ablation on visiting basis*
- Invasive Cardiology
 - *Cardiac Catheterization, Percutaneous Coronary Intervention, Atrial Septal Defect and PFO Percutaneous Closures, Percutaneous Valve Interventions*
- Ambulatory Care
 - *General Cardiology, Adult Congenital Heart Disease, Heart Failure, Electrophysiology (Arrhythmia, ICD and Pacemaker), Pediatric Cardiology, Risk Reduction Clinic*
- Chest Pain Program
 - *An Emergency Department-based chest pain evaluation program*
- Pediatric and Adult Congenital Cardiology
- Research
 - *Broad range of research opportunities from population to basic science*

5. Strong Clinical and Basic Research Program

- Coronary Atherosclerosis
- Valvular Disease
- Cardiomyopathy
- Congenital Heart Disease

- Arrhythmias
- Hypertension
- Pericardial Disease
- Infective Endocarditis
- Pulmonary Heart Disease
- Cardiac Trauma
- Cardiac Tumors and Cardiac Complications of Systemic Disease
- Heart Disease in Pregnancy
- The Heart in Systemic Disease

6. Other Courses

- Research methodology
- Other courses that are deemed appropriate by the faculty

Hospital placement

Fellows will rotate through the various units over three years of training. This is at the Aga Khan University Hospital, Nairobi and the University of Alberta for four months at the end of year 2.

Program structure

- Twice weekly study topics
- Fortnightly journal clubs
- Fortnightly Problem Based Learning Sessions
- Monthly echocardiogram rounds
- Weekly heart team meetings

Areas of Competency Evaluated

All rotations shall have fellows evaluated for progressive competency in the following areas, all of which must be successfully attained as part of training:

1. Medical expert
2. Communicator
3. Collaborator
4. Manager
5. Health Advocate
6. Scholar
7. Professional

Fellowship completion

To successfully complete the course of training, the fellow should at a minimum meet the following requirements:

1. Achieved overall >90% rotation through the modules
2. Fully filled evaluation forms for each rotation, shall have at least 90% of all assessments.
3. Completed log book as necessary
4. Completed research project
5. Passed a written examination offered in the course of training

Members of Faculty

Aga Khan University, Nairobi

1. Dr. Jeilan Mohamed - Director of Cardiac Sciences
2. Dr. Mzee Ngunga - Program Director, Cardiology Fellowship
3. Dr. Anders Barasa – Consultant Cardiologist, Head of Cardiac Sciences Research
4. Prof. Gerald Yonga – Consultant Cardiologist, Head of NCD Research Unit
5. Dr. Harun Otieno – Consultant Cardiologist
6. Dr Mohamed Varwani - Consultant Cardiologist
7. Dr. Ashok Matharu – Consultant Cardiologist
8. Dr. Jay Shavadia – Consultant Cardiologist
9. Dr. Kevin Were – Consultant Radiologist (special interest in coronary CT and cardiac MRI)
10. Dr. Khalid Makhdomi – Consultant Radiologist (special interest in Nuclear Perfusion)
11. Dr. Nekyon – Consultant Cardiac Anesthetist
12. Prof. Raj Jutley – Consultant Cardiovascular Surgeon

University of Alberta, Canada

1. Dr. Ian Paterson – Consultant Cardiologist, Advanced Cardiac Imaging

2. Dr. Lucille Lalonde – Nuclear Cardiology
3. Dr. Rupi Sandhu - Consultant Cardiologist, Electrophysiology
4. Dr. Isabelle Vondermuhll – Consultant Cardiologist, Congenital Heart Disease
5. Visiting Faculty from Collaborating Institutions Internationally

Remuneration and Benefits

This is a paid position that attracts commensurate pay for successful applicants. The compensation includes other medical benefits as enjoyed by staff in the hospital. There is also a budget for office space, a computer that must be handed over at end of training. The fellows are funded for at least one local and international conference per year.

Tuition Fees

Application is free. Self-sponsored trainees are charged annual tuition fees for the course. However, fellows who are sponsored are exempt from this fee.

Application Process

Interested fellows apply in writing to the Postgraduate Medical Education office with two letters of recommendation from supervising physicians. Applicants should meet the following requirements:

- Completion of residency training in internal medicine with MMed, or core training in internal medicine and completion of all parts of the MRCP (UK) exams or equivalent.
- Must have completed or are in their final year of residency in Medicine.
- Must be registered by the member of the Kenya Medical Practitioners and Dentists Council or eligible for registration if applicant is from outside the Country.
- ACLS certification is desirable.
- A period of focused experience in cardiovascular medicine is considered desirable, but not essential.