

# **KWTRP Masters level bioinformatics curriculum for East Africa.**

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# KEMRI-Wellcome Trust Research Programme

- Established in 1989 as a partnership between KEMRI, Oxford University and the Wellcome Trust.
- 800 staff – >100 scientific staff
- Main campus in Kilifi - smaller campus in Nairobi
- Working in most of east & southern African countries.

# Research Areas

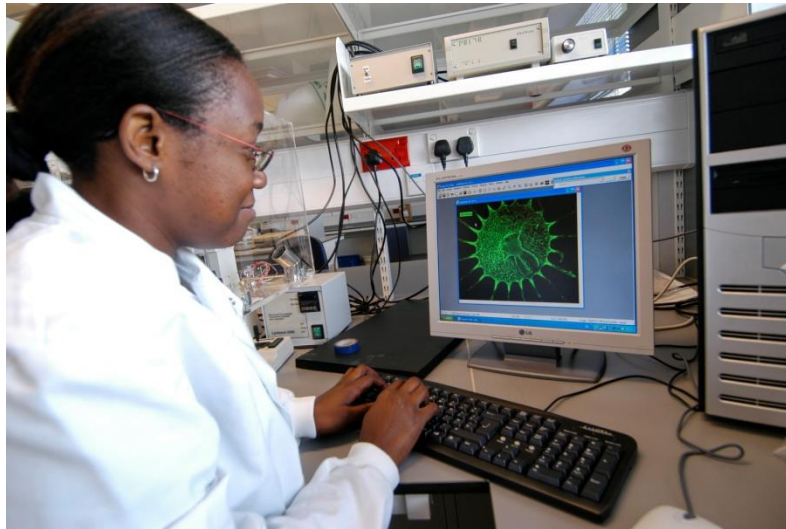
Health Systems, & Social Science

Epidemiology & Demography

Clinical Sciences

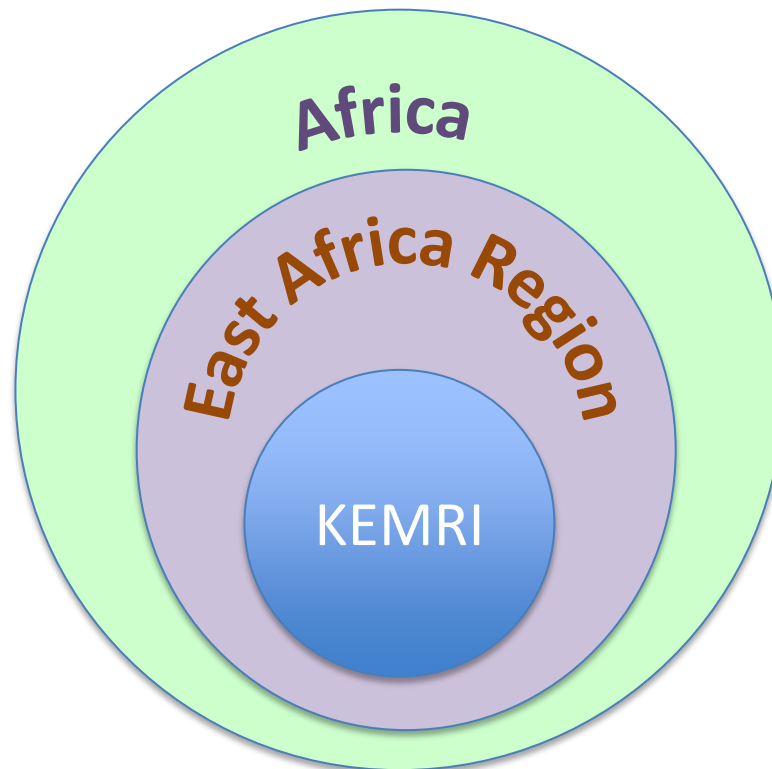
Pathogen, Vector & human Biology

# Research Infrastructures



# CAPACITY BUILDING

**Building local capacity for research is a major aim of KWTRP**



# Scientific Staff

2008 40 post docs 18 (45%) African

2013 51 post docs 33 (63%) African

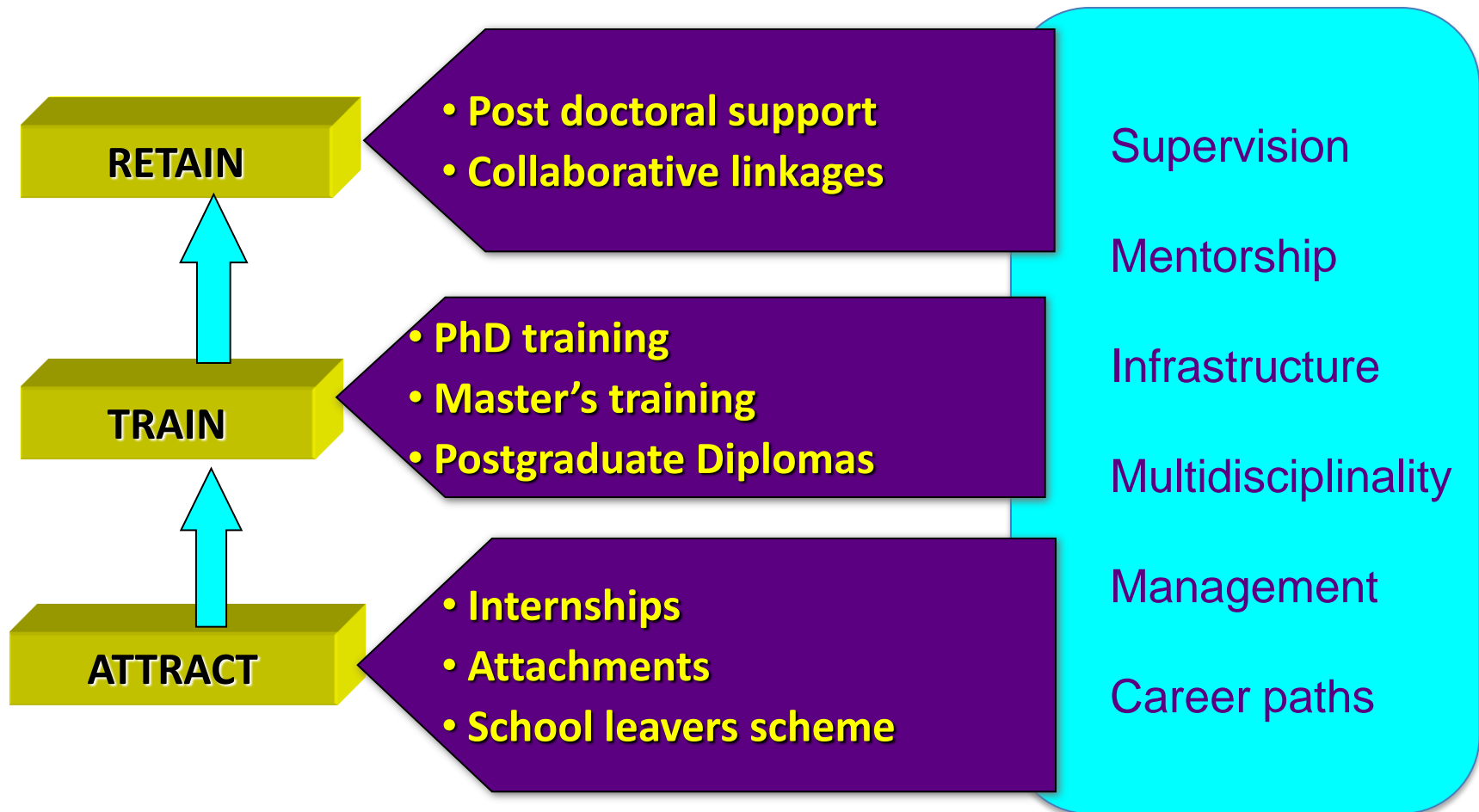
32 fund holders 16 (50%) African

# Framework

**AIM**

**SCHEME**

**TOOLS**



## Interns since 2006

**113**



**6 - Postdocs**

**21 - PhD students**

**14 - Masters students**

**36 - Research Ass't.**

**36 - Other**

**24 have international Masters and PhD fellowships / scholarships**



# PhD Training

**Completed**

**Current**

**1989 – 2008**

**2008 – 2013**

25 African

7 non African

32 African

1 non African

38 African

7 non African

10

Molecular biology

18

Molecular biology

# Masters level bioinformatics curriculum for East Africa

- KEMRI has received funding from Wellcome Trust to develop a MSc Bioinformatics curriculum.
- Objectives:
  - To address the gaps in the teaching of bio-informatics in East African universities,
  - Generate a cohort of highly trained Masters level bioinformaticians who will enhance bio-info teaching and research in East African universities,
  - Create a pool for future PhD training in Bioinformatics .

# Objective 1

## Improving the teaching of bio-informatics

- Provide high level theory and skills updating workshops for teachers by skilled trainers,
- Develop common curriculum during these workshops,
- Provide the participating institutions with eBiokit.

## Objective 2:

### Generate a cohort of highly trained Masters level bioinformaticians

- Train to 15 to 20 students registered with the participating universities with the aim that the university would subsequently engage some into their teaching faculty,
- The hope is that the new graduates, having received the enhanced training, will help sustain the improved curriculum beyond this project.

# Methodology

- The programme will consist of teaching blocks and workshops delivered by highly experienced bio-informatics,
- Attendance of bio-info conferences,
- Attachment to a productive research centres for their research project.
- More teaching may be provided through guided online learning using resources such as Coursera or EdX.

# Issues

- Develop course de novo and then try to sell it to a single university who will house the programme?
- Use South African model where bioinformatics students from different universities are brought together for a block session of concentrated teaching to enhance their theoretical background?

