

Bio-banking and Metagenomics Platforms for Pathogen Discovery

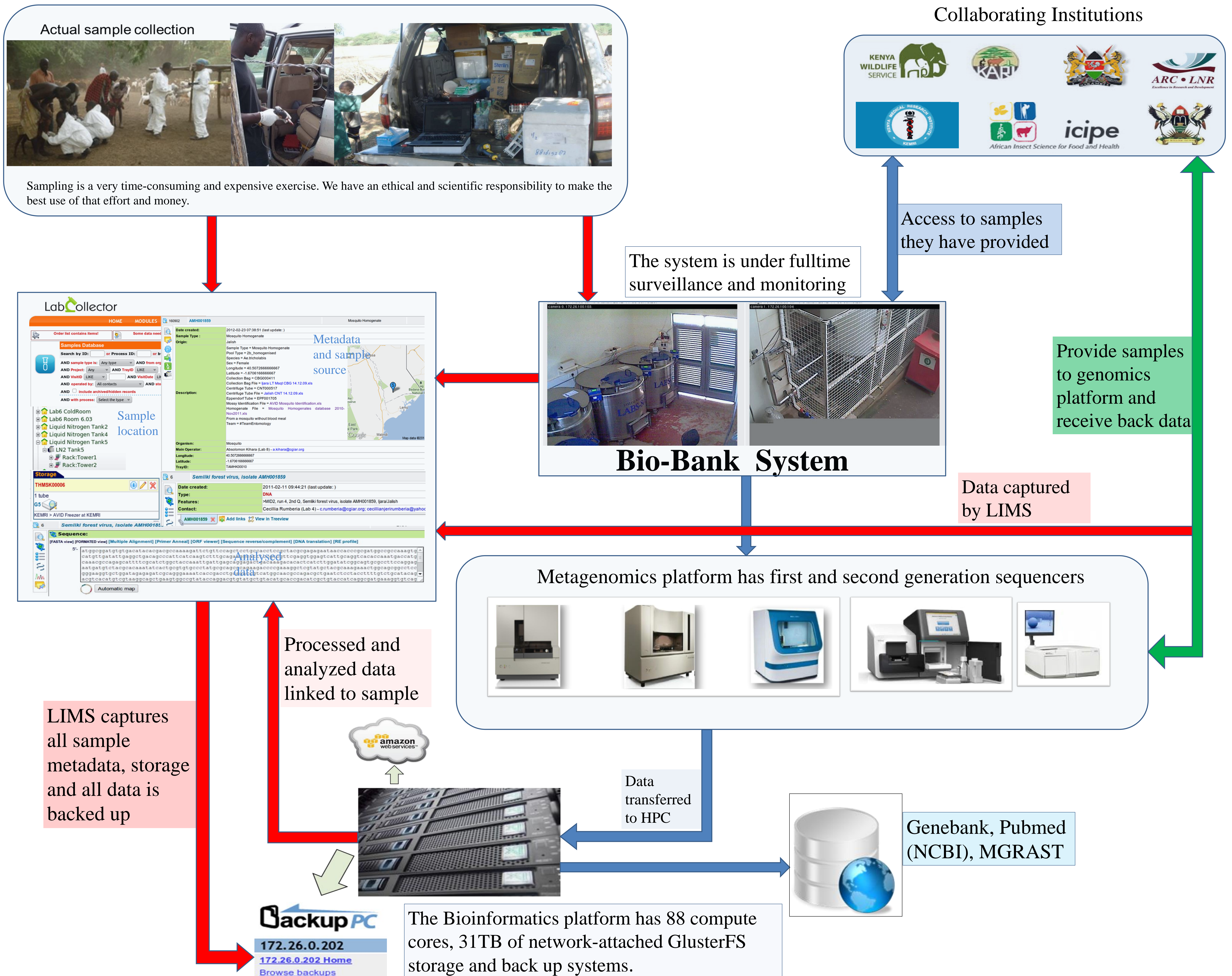
George Michuki, Absolomon Kihara, Alan Orth, Cecilia Rumberia and Steve Kemp

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Introduction

There has been documented increase of emergence and re-emergence of zoonotic infectious diseases in Africa in the past years. The pathogen discovery team at the International Livestock Research Institute (ILRI) addresses the problem in Kenya and beyond. The genomics platform at ILRI which is an integration of the bio-repository (Biobank), first and second generation sequencing platforms and high performance computing systems facilitates the pathogen discovery work.

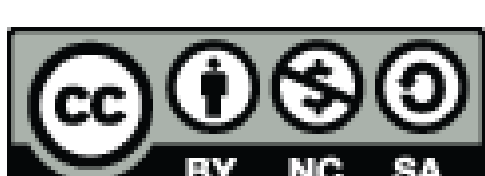
Source of samples: Field sampling and collaborators



Conclusion

The biobank currently has 340,000 samples which include blood, tissues and semen among others from livestock, wildlife, human and insects collected from East, West and Central Africa among other regions. The genomics platform at ILRI has generated outputs ranging from whole/partial genome sequences of Rift Valley fever, Equine Encephalosis, Blue Tongue, African swine fever, Ndumu, Semliki forest, Dugbe, Bunyamwera, Chikungunya, Newcastle disease and Pigeon Paramyxo - viruses among other organisms including, bacteria, plants and animals. A number of the genomes are also available to the public on NCBI database.

George N. Michuki
g.michuki@cgiar.org • Box 30709 Nairobi Kenya • +254 20 422 3467
• www.ilri.org



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