Summary of Interepizootic Maintenance of Virus

- RVF – wide diversity of Vector species
  - *Aedes, Culex, Mansonia, Amblyomma*
- Vector surveillance necessary in outbreak hotspots/regions during IEP
- Blood meal Analysis
  - (mosquito-human, Reservoirs)
- Animal Reservoirs
  - Antibody prevalence los or nil among poikilotherms
  - Cells from frogs and lizards not productively infected
  - Avian species have low or nil antibody prevalence and no viremia
  - Mammals have not been observed to show latency

Conditions leading to epizootic and epidemic Activity

- Introduction of virus into new areas
  - Ghazi Yehia, OIE Regional Representative
- Reintroduction into previously affected areas
  - Mansoor Mohammed Ali Al Qadasi, Yemen, CVL
- Environmental and Ecological Conditions
  - Ali Nasser Hassan, Ain Shams University
- Update on the situation in Egypt (Animal Health)
  - Sayed Ahmed Hassan, Animal Health Research Institute

Summary of Conditions leading to epizootic and epidemic Activity

- Dr. Yehia, OIE Regional recommendation
  - Develop regional and international strategies for prevention and control
    - Coordination between all actors
    - Establishment of sound regional risk models
    - Increasing the number of Reference Laboratories
    - Enhanced professional capacity
- Dr.Al Qadasi, Yemen CVL
  - RVF Surveillance to detect re-introduction
- Dr. Hassan, Animal Health Res. Inst.
  - RVF controlled by Vaccination, Surveillance and Vectors control

Key Issues

- Cooperation at the global level to create an integrated approach to control RVF under the "One World, One Health" concept – FAO has already established a steering committee that collaborates with the WHO to set programs to fight disease
- Rich countries should help those less capable of helping themselves
- Financial support should be available for training local professionals, distributing information, educating the public, and surveillance efforts

Key Issues Con't

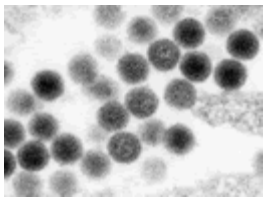
- Create regional reference labs to facilitate rapid response
- Strengthen cooperation between human and animal health sectors
- Better efforts to control and monitor animal movement
- Better understanding of human movement
- Better understanding of insect movement
- Stop using humans as the sentinel for disease outbreaks – instead enhance surveillance of animals and vectors for virus activity
- Overcome the fear of economic loss: find ways to encourage transparent reporting of disease occurrences in animals
- Overcome the issue of countries with political problems or governing bodies unwilling to admit to disease occurrences because of the fear of its devastating economic impact

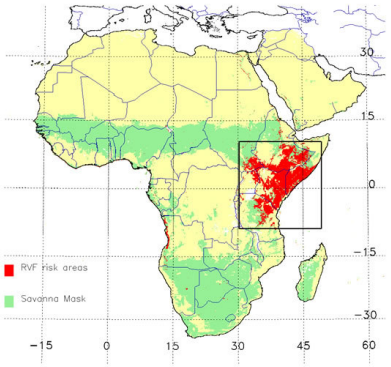
Keynote

- Epidemic and Pandemic Alert and Response Department
  - Pierre Formenty, WHO

Disease Surveillance and Diagnostics

- Early warning
  - Assaf Anyamba, NASA
- Early detection: animas versus humans versus vectors
  - Bob Swanepoel, NCID
- Diagnostic tools: surveillance, outbreak, and return to trade
  - Hermann Unger, FAO/IAEA





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Key Diagnostic Issues

- Current issues with available serologic tests are:
  - Availability and safety in production of reagents
  - Cost of reagents
  - Consistency and confidence in the available assays
  - Validation of these new tests for their fitness for purpose (OIE and etc.)
- Current issues with available virus detection methods are
  - Availability of vaccinated staff
  - Availability of appropriate facilities and PPE
  - Consistency and confidence in the available assays
  - Validation of these new tests for their fitness for purpose (OIE and etc.)

Session 3:
RVF Research Needs and Priorities

- *Early warning*
  - Coordination of Government Resources and Database
  - Development of informational materials for Human and Veterinary Public Health
  - Enhanced communication with appropriate medical, veterinary and entomology control officials
  - Integration of Veterinary, Medical and entomology surveillance data into risk assessment models
  - Application and refinement of early warning models outside of East Africa

Session 3:
RVF Research Needs and Priorities

- *Early detection:*
  - Development, refinement and/or evaluations of surveillance system
  - Evaluation of surveillance and field diagnostic tools
    - Veterinary, sentinel herd, vector and syndromic
    - Passive or active observational, laboratory, high risk, clinical, market
  - Development/enhancement of veterinary and Entomology capacity
  - Coordination of emerging zoonotic disease detection, databases and response efforts
  - Better understanding of the epidemiology including the role of camels and buffaloes

Session 3:
RVF Research Needs and Priorities

- *Diagnostic tools:*
  - Coordination of evaluation and quality control of diagnostic tests
  - Evaluation of the appropriate use of available diagnostic tests during the course of infection in relevant animal hosts
  - Development and evaluation of field diagnostic tests
  - Coordination of development and evaluation of diagnostic tests compatible with DIVA vaccines
  - Quality control and reference sera and specimens for test evaluation and proficiency testing
  - Development of tools for simultaneous detection of mosquito species and virus

Disease Control

- Experience with vaccinating livestock in an endemic setting
  - Jacqueline Kasiiti Lichoti, Kenya CVL
- Preventing epizootics and epidemics by livestock vaccination
  - Baptiste Dungu, GALVMed
- Preventing epidemics by human vaccination
  - Phil Pittman, USAMRIID
- Preventing epizootics and epidemics by vector control
  - Hanafi Hanafi, NAMRU 3

Session 4:
RVF Research Needs and Priorities

- Basic research (virulent infection)
  - Develop animal challenge models for priority animal hosts
  - Determine correlates of protection (immunity, innate and acquired)
  - Understand mechanisms of protective immunity
  - Understand differences in immune response between vaccine formulations
  - Understand human pathobiology
  - Understand and characterize host-virus-vector interactions.