OIE REGIONAL SEMINAR ON VETERINARY PRODUCTS JOHANNESBURG – SOUTH AFRICA 23 – 26 NOVEMBER 2010

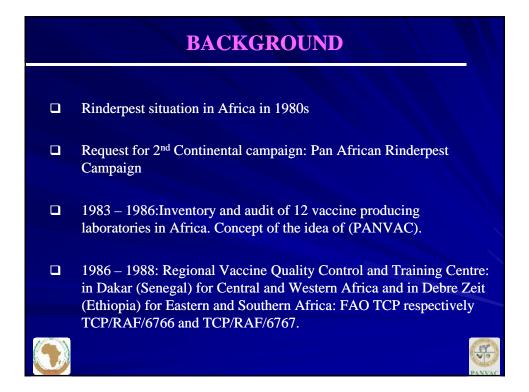
PAN AFRICAN VETERINARY VACCINE CENTRE OF AFRICAN UNION (AU/PANVAC)

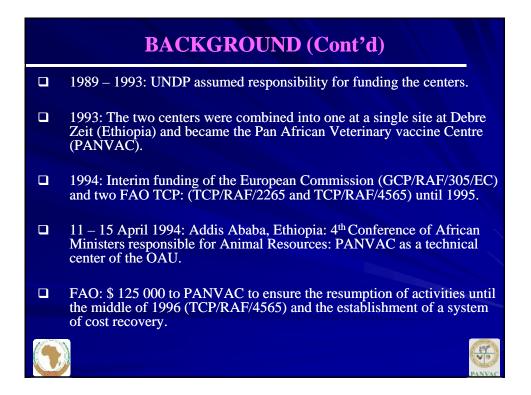


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BACKGROUND (Cont'd)	
	April1997: PANVAC component B began funded (\$1.5 million) for 5 years by the government of Japan (Reinforcement of Veterinary Vaccine Production and Quality Control by PANVAC, GCP/RAF/377/JPN).
	23-27 February 1998: Addis Ababa: 67 <sup>th</sup> Ordinary OAU Council of Ministers decided to elevate PANVAC to the level of a Centre of Excellence for vaccines productions and Quality Control in Africa with a status of an OAU Specialized Agency.
	September 1999: Appreciating the encouraging decisions of 67 <sup>th</sup> OAU Council of Ministers, EU granted about 1 million ECU through OAU/IBAR to support PANVAC QC for 5 years.
	18-22 March 2002: Addis Ababa: 6 <sup>th</sup> Conference of Ministers responsible for Animal resources recommended the immediate resumption of PANVAC QC activities.

# BACKGROUND (Cont'd)

- 12th March 2004: The Centre was officially launched as an AU Regional centre at Debre Zeit (Ethiopia) and the Department of Rural Economy and Agriculture of the AU Commission included PANVAC's strategic plan into its 2004 2007 Strategic Plan.
- □ 6-7 December 2004 Addis Ababa : Approval of PANVAC structure within DREA by The 6th Extraordinary Session of the AU Executive Council.



# **VISION AND MISSIONS**

□ Founded in the belief that, with respect to the major vaccine Preventable infectious diseases (Rinderpest, CBPP, PPR, FMD, ND etc), the health of livestock in Africa can be drastically improved by the use of good quality vaccines and good diagnostic biologicals.

## □ VISION:

"Build a Recognized in the international arena, Reference Centre for Vaccine quality control, technology transfer, production of diagnostic and surveillance reagents and capacity building, driven by and for African professional."





# **QUALITY CONTROL OF VACCINES**

#### Definition

Part of GMP which is concerned with sampling, specifications and testing, and with the organization, documentation and release procedures which ensures that the necessary and relevant tests are actually carried out and that products are not released for sale or supply, until their quality has been judged satisfactorily.

- In-process QC: Producers

- QC on final product: In house and Independent

- Essential Requirements for a vaccine of good quality: PURITY; SAFETY; POTENCY; EFFICACY





# **QUALITY CONTROL OF VACCINES (CONT'D)**

#### LIVE ATTENUATED VACCINES QC

- Submission to PANVAC: Freeze dried: 20 vials

- Quality Control tests

- \* Vacuum test (qualitative test)
- \* Residual moisture
- \* Freedom from contamination:
- Bacterial and Fungi contaminants: Media inoculation and incubation + subculture;
  - Mycoplasma contamination: ELISA and PCR;
  - BVD contamination: IP and PCR
- \* Identity: ELISA, IF, PCR
- \* Safety tests: Lab. Animal and host animals (CBPP T144)
- \* Potency/Efficacy (in vitro): Titration
- \* Stability tests: validity of the expire date
- \* Interference test: 2 or more antigen components



#### INACTIVATED VACCINES

Submission to PANVAC: Liquid form: 10 bottles
Quality Control tests

- \* Level of residual inactivant (Formalin)
- \* Completion of inactivation: Culturing
- \* Identity: PCR / Efficacy
- \* Safety tests: Lab. Animal and host animals
- \* Efficacy: Vaccination/challenge
- \* Stability tests: Adjuvant
- \* Interference test: 2 or more antigen components (FMD vaccines)



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## **Reagents Production**

□ Objective: To build in Africa a Reference Center for Animal Disease Diagnosis

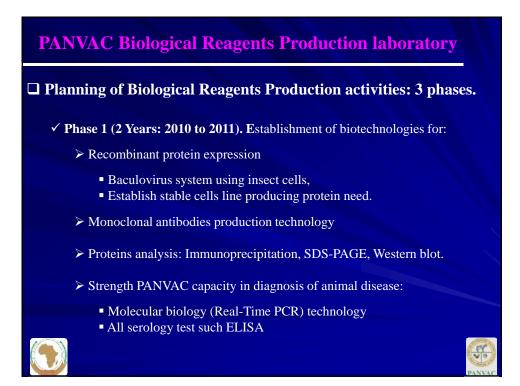
### □ Activities will focus on:

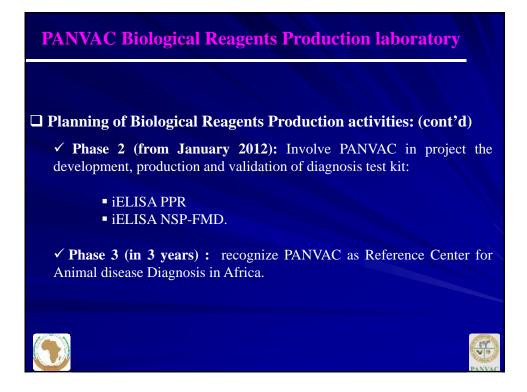
 $\checkmark$  The production and distribution of reagents (Kits) for animal disease diagnostic

 $\checkmark$  The implementation of latest molecular technologies for disease diagnosis

 $\checkmark$  Training veterinarian labs technicians to the latest laboratory diagnosis techniques

✓ Provide assistance to national veterinary laboratories in animal disease diagnosis.







# ACHIEVEMENTS

Vaccine Quality Control fully operational:

✤ Diseases: RP, PPR, CBPP, RVF, SGP, AHS, HS, BL, Anthrax, ND, IBD, AI, IB.

- ✤ Vaccine Received From producing Lab:
  - Africa: Mali, Niger, Senegal, Cameroon, Chad, Sudan, Ethiopia, Kenya, Botswana, Mozambique, Egypt & South-Africa.
  - Middle East: Jordan and Turkey
  - Europe (France): LAPROVET.
  - Vaccines tested in 2009: 55 batches (67 % pass)
  - •Vaccines tested in 2010: 93 batches



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# **ACHIEVEMENTS** (cont'd)

- ✤ Meetings: Pan African Meeting of Vaccine Lab. Directors.
  - Debre Zeit;
  - Pretoria
  - Cairo
- Establishment of Biological Reagents Production Laboratory:
  - Essential Laboratory Equipment in place
  - In 2010 Establishment of the basic biotechnologies for production and analysis of biological reagents.









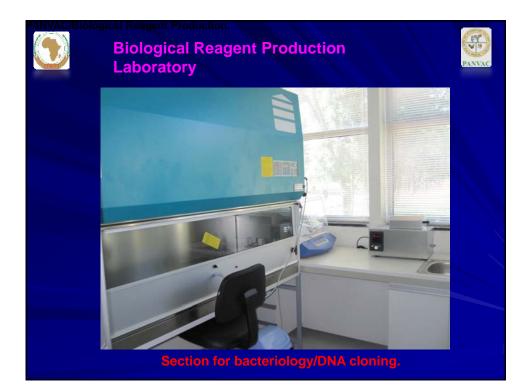




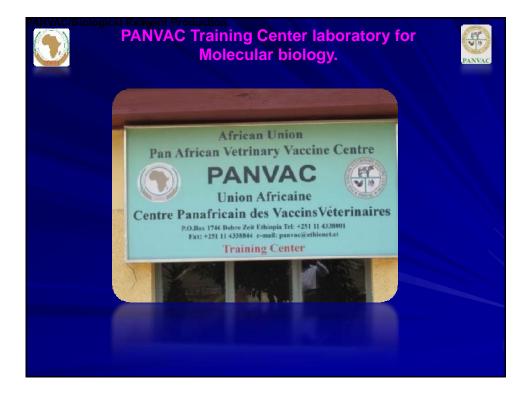




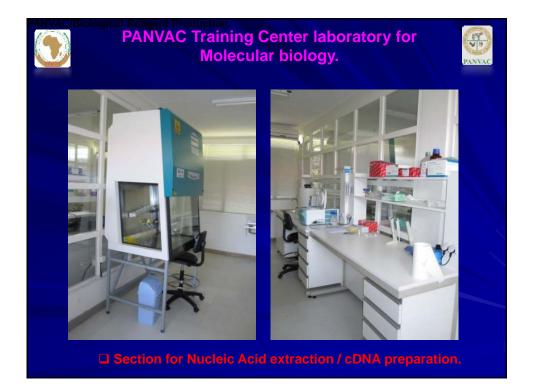


























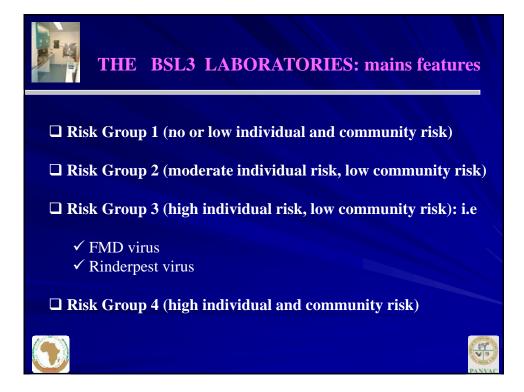






## Establishment of Pan African Repository of Vaccines Strains at PANVAC: The BSL3 laboratory





# **MOBILE LAMM : BSL3 AIRLOCKS VIEWS**



ENTRANCE AIRLOCK

SERVICE HATCH (P3 LAB SIDE)



WASHBASIN





