

# ISOLATION OF A NEW TOPOTYPE OF FOOT-AND-MOUTH DISEASE VIRUS SEROTYPE SAT1 IN CATTLE IN NIGERIA



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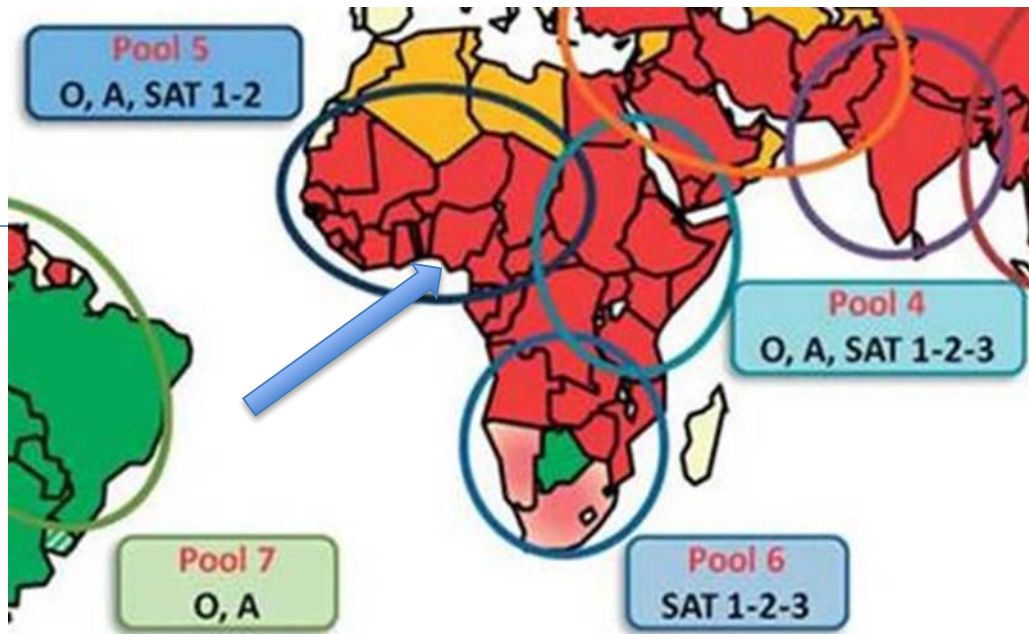
Ehizibolo David, Haegeman Andy,  
De Vleeschauwer Annebel,  
Ularamu Hussaini, Lazarus David,  
Yiltawe Wungak, Umoh Jarlath,  
Kazeem Haruna, Okolocha  
Emmanuel, Van Borm Steven,  
Lefebvre David, De Clercq Kris

2017 GFRA Scientific Meeting

SESSION III: FMD Ecology and Epidemiology: Differences in Africa and Asia

Wednesday October 25th 2017

# Nigeria



- Movement of cattle in the country and across the borders (import, nomadic pastoralism)
- Veterinary service: no control program for FMD
- FMD vaccination when vaccine is available
- No systematic surveillance
- Notifications of FMD are sporadic
- Need for better understanding of the epidemiology of FMD
- FMDV in Northern Nigeria in 2013-2015: O/EA-3, O/WA, A/Africa/G-IV and SAT2/VII  
(Ehizibolo, Haegeman et al., 2017, Transbound Emerg Dis)

# October 2015: detection of FMD virus SAT1 in a cattle herd in Jos South LGA



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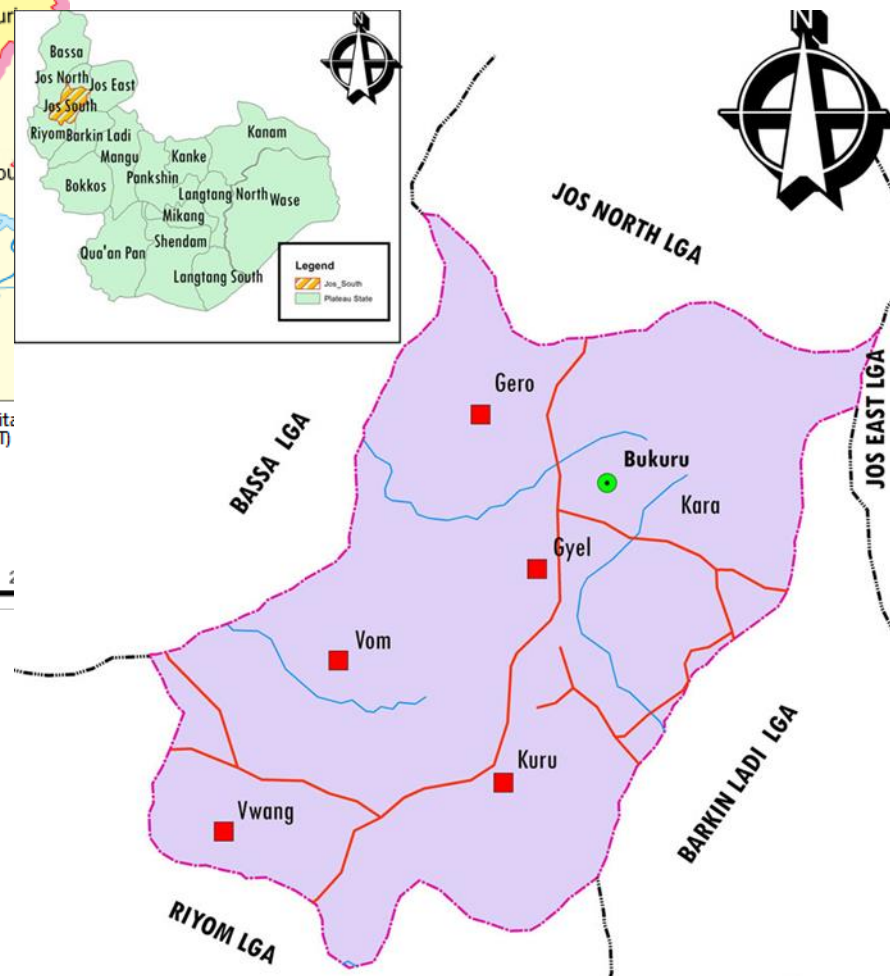
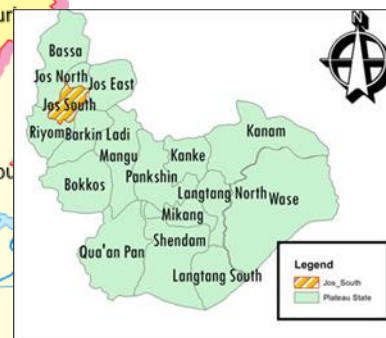
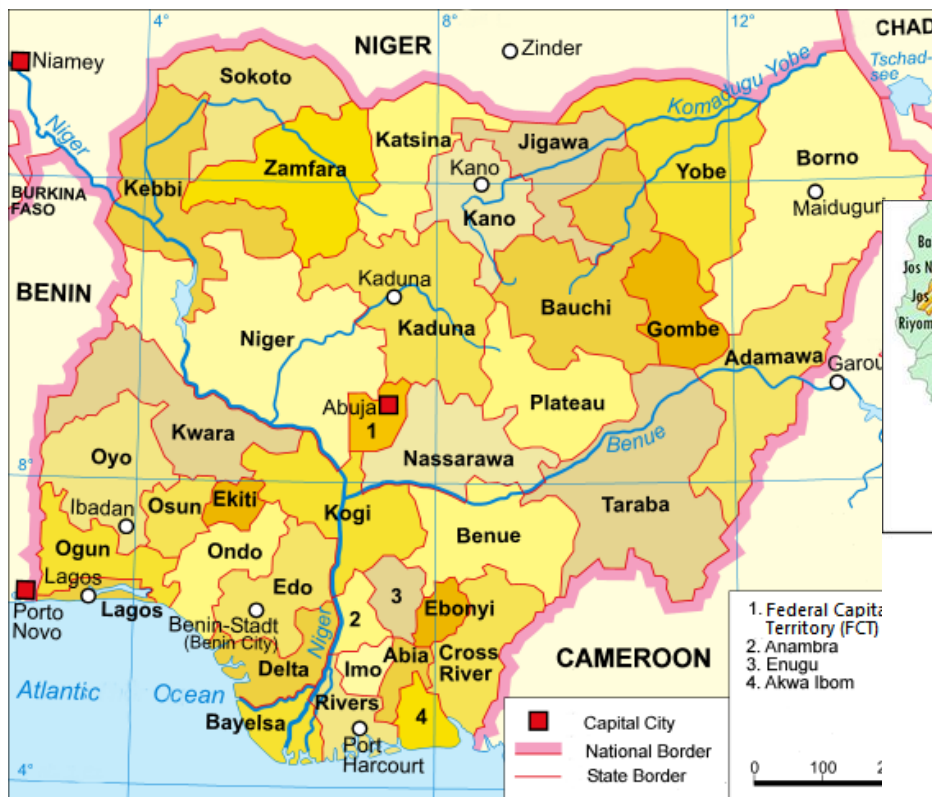


NATIONAL VETERINARY RESEARCH INSTITUTE, VOM, NIGERIA

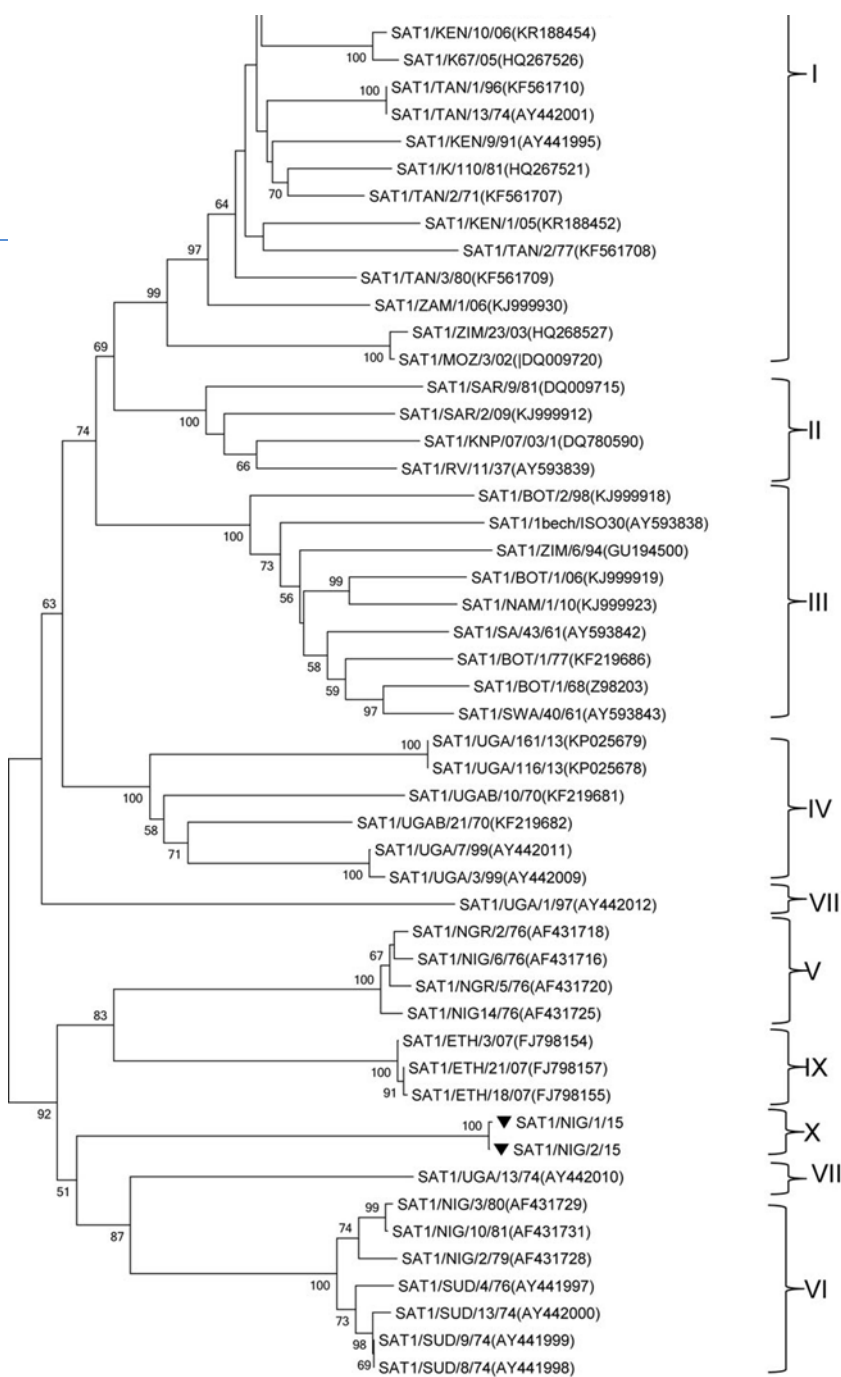


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# Identification of a new Topotype of SAT1



|  | <u>% NT homology</u> | <u>% AA homology</u> |
|--|----------------------|----------------------|
|--|----------------------|----------------------|

## Topotype V

|                |    |    |
|----------------|----|----|
| SAT1/NGR/2/76  | 71 | 79 |
| SAT1/NGR/5/76  | 70 | 79 |
| SAT1/NIG/6/76  | 71 | 79 |
| SAT1/NIG/14/76 | 71 | 79 |

## Topotype VI

|                |    |    |
|----------------|----|----|
| SAT1/NIG/2/79  | 71 | 78 |
| SAT1/NIG/3/80  | 71 | 76 |
| SAT1/NIG/10/81 | 71 | 78 |

# Discussion

- Re-emergence of undetected circulating SAT1 in Nigeria?
- New introduction of SAT1 in Nigeria?
- Sustained surveillance is needed to understand the origin and the extend of distribution of SAT1 Topotype X in Nigeria (and neighboring countries)
- Dynamic and complex nature of FMD in Nigeria (and in Pool 5)
- The knowledge of FMDV dynamics and epidemiology:
  - to support future control plans
  - to support risk assessment and legal international trade
- Vaccine matching studies to determine the best suited vaccine (if good quality vaccines are available)



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INSTITUTE, VOIM, NIGERIA



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