



Strengthening Regional Laboratory Networks and Collaborative Research on Emerging Pathogens: The Role of the Molecular Research Facility at Abubakar Tafawa Balewa University Teaching Hospital, Bauchi

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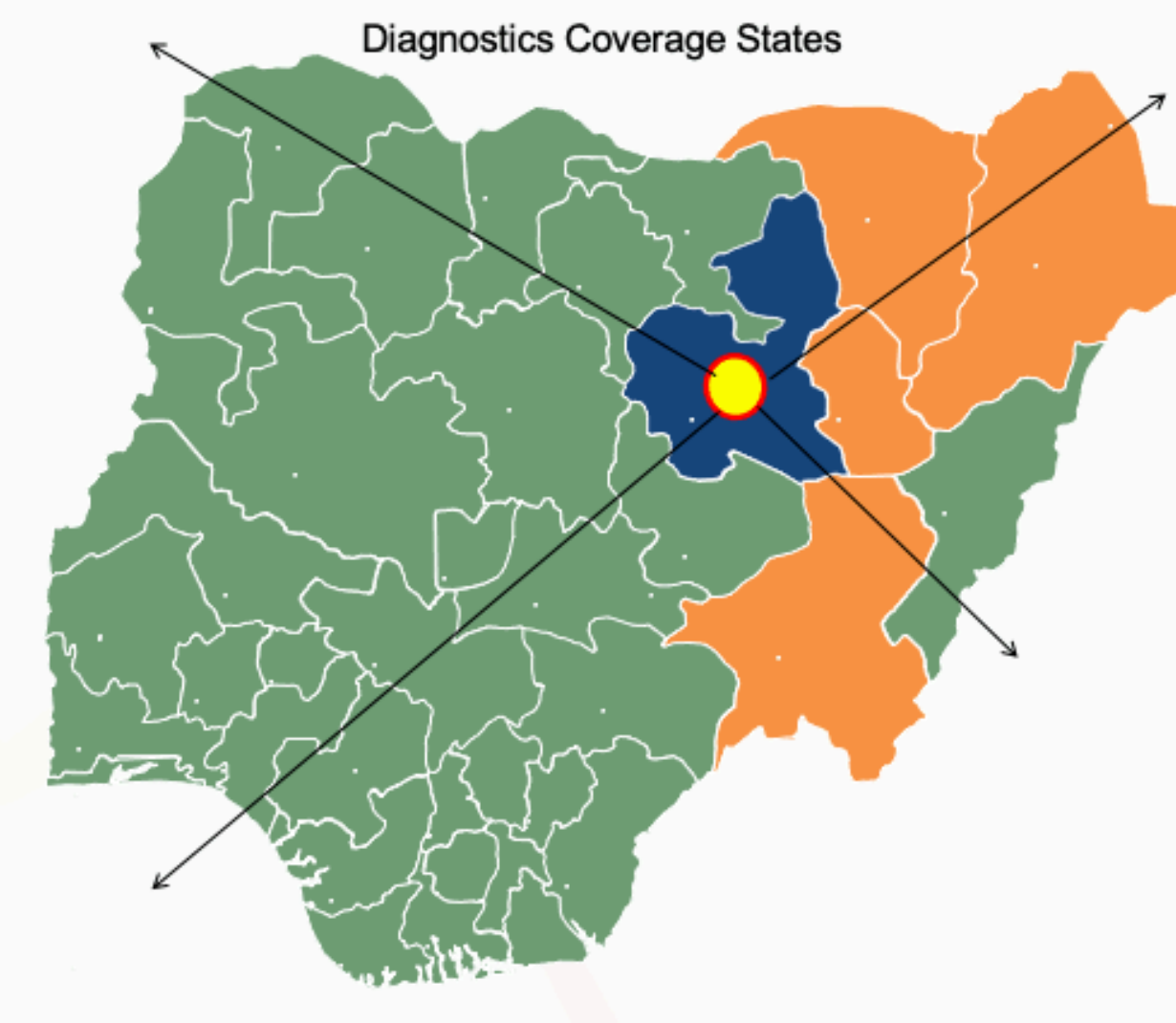
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Background

- Emerging/re-emerging infectious diseases remain a persistent threat in West Africa
- Viral haemorrhagic fevers (Lassa, Ebola, Yellow Fever) are major outbreaks
- COVID-19 brought a global challenge that advanced diagnostics and research
- West Africa needs sustainable laboratory networks & collaborative R&D



- MOGID Research Laboratory (MRL) at the ATBUTH, Bauchi is an NCDC-optimized RT-qPCR facility and engaged in ongoing capacity-building projects
- Diagnostics: Lassa virus (LASV), SARS-CoV-2, Monkeypox (Mpox), Varicella Zoster Virus (VZV), other VHF and Pathogen X (?)
- Central role: Surveillance, outbreak response, capacity building and research

Approach

Highlight MRL as a strategic hub for:

- Collaborative research
- Sustainable capacity building
- Closing gaps in preparedness for emerging diseases

Descriptive assessment of:

- Diagnostic capacity (RT-qPCR/Seq platforms, biosafety)
- Service coverage (catchment states, outbreak support)
- Collaborations (clinical integration, donor-supported activities)

Reviewed contributions to:

- Clinical care outcomes
- Surveillance & outbreak response
- Workforce training

Inputs
- RT-qPCR platforms
- Trained staff
- NCDC support

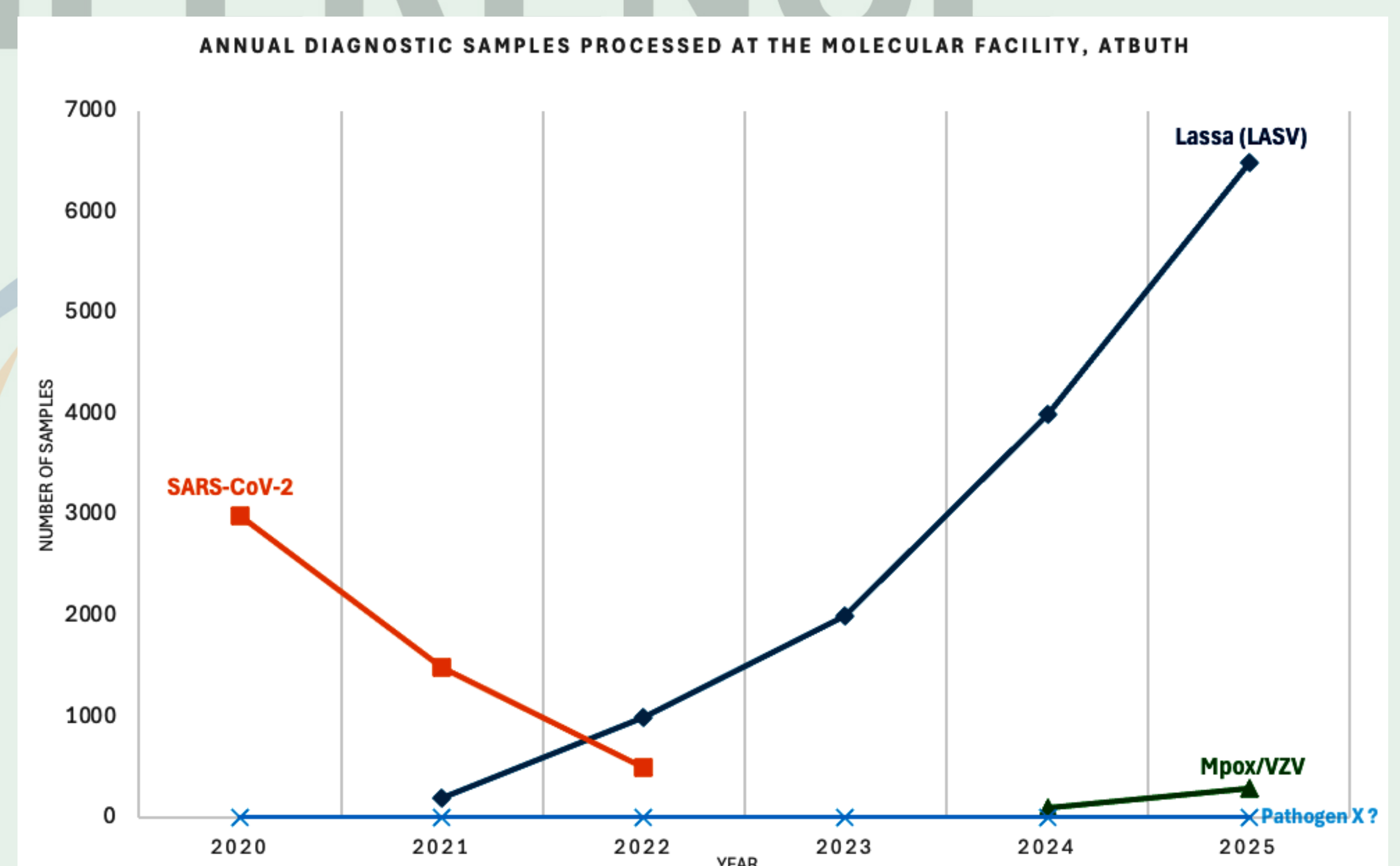
Activities
- Diagnostics
- Surveillance
- Outbreak response
- Training

Outcomes
- Improved patient care
- Regional readiness
- Research collaborations

Progress

- Positioned as central node in Bauchi State surveillance
- Enhanced patient care & treatment outcomes
- Contributions to Lassa fever & other infectious diseases diagnostics in North Eastern Nigeria
- Donor & stakeholder support e.g a CEPI/MRCG project has strengthened:
 - Research foundation
 - Workforce development
 - Operational readiness for outbreaks
 - Active collaborations with national & regional partners

Pathogen	Role
Lassa virus (LASV)	Outbreak diagnostics
SARS-CoV-2	Pandemic response
Monkeypox (Mpox)	Emerging infection monitoring
Varicella Zoster Virus (VZV)	Routine Diagnostics
Other VHF and Pathogen X	Research and preparedness



Take-Home Message and Recommendations

- MRL is a platform for regional pathogen preparedness with opportunities for:
 - Collaborative research
 - Data/resource sharing
 - Regional expertise exchange and coordination
- Contribution to regional infectious disease research agenda
- Supports sustainable outbreak preparedness

- Strengthen regional partnerships with ECOWAS institutions and global south investment to reduce dependence
- Expand multi-pathogen R&D collaborations
- Scale up trainings & infrastructure for early detection & response
- Develop data-sharing frameworks for surveillance
- Enhance policy linkage to regional outbreak response strategies

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