



ASLM

AFRICAN SOCIETY FOR LABORATORY MEDICINE

2021

10th Anniversary



ASLM2021

Conference Report

15-18 November 2021

TABLE OF CONTENTS

Abbreviations	3
Executive Summary	4
ASLM2021 Conference Committees	6
Opening Ceremony and Keynote Address	7
Welcome	8
ASLM 10th Anniversary Retrospective	9
Keynote Address	10
Official Opening of ASLM2021	11
Scientific Sessions	13
Sub-theme 1: Outbreak Effect	15
Sub-theme 2: Laboratory Response and Lessons Learnt	19
Sub-theme 3: Ownership, Partnership and Innovation	22
Closing & Awards Ceremony	25
Closing Ceremony	26
Awards Ceremony	27
Appendix A: Programme at a Glance	32
Appendix B: CPD Certificate, Endorsers, Sponsors	33

ABBREVIATIONS

Africa CDC	Africa Centres for Disease Control and Prevention
AMR	Antimicrobial Resistance
ASLM	African Society for Laboratory Medicine
CEO	Chief Executive Officer
CHAI	Clinton Health Access Initiative
COVID-19	Coronavirus Disease 2019
CPD	Continuous Professional Development
DNO	Diagnostic Network Optimisation
FIND	Foundation for Innovative New Diagnostics
HIV	Human Immunodeficiency Virus
LabCoP	Laboratory Strengthening Community of Practice
NHLS	National Health Laboratory Service, South Africa
QMS	Quality Management System
RT-PCR	Real Time Reverse Transcription Polymerase Chain Reaction
SARS-CoV-2	Severe Acute Respiratory Coronavirus 2
SLMTA	Strengthening Laboratory Management Toward Accreditation
USAID	United States Agency for International Development
US CDC	United States Centers for Disease Control and Prevention
WHO	World Health Organization

Executive Summary



Prof. Isatta Wurrie,
ASLM, co-chair
Senior Lecturer, Head of Chemical Pathology Department, and Laboratory Science Coordinator at the College of Medicine and Allied Health Sciences, University of Sierra Leone



Dr Yenew Kebede,
ASLM, co-chair
Head of Laboratory Systems, Africa Centres for Disease Control and Prevention

The biennial conference of the African Society for Laboratory Medicine (ASLM), which gathers to share best practices, acquire knowledge and debate innovative approaches for advancing laboratory medicine and combatting health threats, is the most visible continental event for the African laboratory medicine community. Chaired by Prof Isatta Wurie and Dr Yenew Kebede, ASLM's fifth biennial international conference, [ASLM2021 Virtual](#), was convened from 15-18 November 2021, and themed 'Responding to outbreaks through resilient laboratory systems: Lessons learnt from the COVID-19 pandemic'. Due to the coronavirus disease 2019 (COVID-19) pandemic and to prioritise the health of delegates, ASLM2021 was convened virtually (online). ASLM2021 also commemorated ASLM's 10th anniversary.

ASLM2021 brought together over 800 laboratory scientists, clinicians, healthcare workers, ministry of health representatives, health economists, researchers, students, global health partners, diagnostic companies and private industry. Overall, the scientific programme included 115 invited faculty (74 male and 41 female), [three plenary sessions, two special sessions, six symposia, four round tables](#), 12 abstract-driven sessions ([71 oral presentations](#)), and a [Virtual Exhibit Hall with over 70 e-posters](#). Delegates from over 60 countries, with strong representation from across the African continent, Europe, and the United States, attended ASLM2021. The virtual conference focused on three key sub-themes: **Outbreak Effect, Laboratory Response and Lessons Learnt and Ownership, Partnerships and Innovation.**

KEY HIGHLIGHTS OF THE CONFERENCE

- In preparing for epidemic responses, Keynote Speaker Dr Tom Frieden introduced a valuable metric, 7-1-7, which entails that every suspected outbreak should be identified within **seven days**, that cases are reported publicly, with the initiation of investigation and control within **one day**, and that an effective response, very rigorously defined, be established within **seven days**.
- Dr John Nkengasong emphasized that one of the greatest lessons learned by Africa is the need to invest in its healthcare systems and create a [new public health order](#) and public health renaissance as critical to secure the health of our people and continent. Public health must re-assess the value of old strategies and paradigms.
- The power of collaboration in mobilising and pooling resources, tools, and strategies is key to collectively improve our systems and to respond to pandemics. Africa has a leadership role to play. This includes the message that the moment for African leadership and equality in collaborations is now.
- Interventions to prepare for future epidemics include promoting and creating partnerships for local manufacturing of diagnostics; implementing regional integrated surveillance and laboratory networks to promote collective approaches to disease outbreaks; and integration of laboratory services, especially giving more attention to capacity building.
- We need to act now on antimicrobial resistance (AMR). This call to action does not mean simply inventing new antibiotics, but also better ways to detect organisms resistant to antimicrobials and better infection control mechanisms. There is a need to expand bacteriology services below the secondary/intermediate care level, including quality management systems (QMS) implementation and accreditation in bacteriology laboratories.
- The next steps for QMS implementation should be building national quality structures, e.g., national accreditation bodies, laboratory licencing systems, skilled workforce, national External Quality Assessment programmes and calibration centres. This can be guided by the Africa Centres for Disease Control and Prevention (Africa CDC)'s [Guidance for Establishing a National Laboratory Quality Framework](#).
- Laboratory workforce development and opportunities for professional advancement should continue at every level of healthcare services, including nurturing future leadership.
- Countries should seek guidance from the World Health Organization (WHO) [Laboratory Biosafety Manual](#) and current risk-based approaches to managing biosafety and biosecurity risks.
- Human health cannot handle this pandemic alone. A One Health approach, including environmental, animal and human health interventions, is needed to control zoonotic infections, i.e., infections transmitted between species, namely from animals to humans.
- Optimising epidemiology data flow within countries and data sharing among countries is essential. Next steps include harmonisation of different data systems, building data management infrastructure, obtaining political support, developing functional data regulatory bodies through policies and the use of artificial intelligence to translate data into useful public health information.
- Mr Nqobile Ndlovu, ASLM Chief Executive Officer (CEO), emphasised that ASLM will continue to focus on (i) facilitating introduction of innovative technologies, (ii) expanding opportunities for formal Continuous Professional Development (CPD) programmes, qualification and professional development, (iii) advancing laboratory network capacity, (iv) improving access to diagnostics, (v) advancing QMS at all levels and (vi) facilitating information sharing.

ASLM2021 CONFERENCE COMMITTEES

ASLM2021 CONFERENCE CHAIRS

Isatta Wurie

College of Medicine and Allied Health Sciences, Sierra Leone

Yenew Kebede

Africa CDC Head of Laboratory Systems & Networks Division, Ethiopia

EXECUTIVE COMMITTEE

Nqobile Ndlovu

African Society for Laboratory Medicine, Zimbabwe

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Opening Ceremony and Keynote Address



WELCOME

ASLM2021 Conference Chairs Prof Isatta Wurie and Dr Yenew Kebede welcomed conference attendees and highlighted the conference theme: 'Responding to outbreaks through resilient laboratory systems: Lessons learnt from the COVID-19 pandemic.' Delegates were reminded that the launching of ASLM in Addis Ababa, Ethiopia in 2011 was a direct response to the 2008 [Maputo Declaration](#), which called for the development of robust laboratory systems for the detection of globally high burden diseases such as human immunodeficiency virus (HIV), tuberculosis, and malaria. In congratulating ASLM on its 10th year anniversary, Prof Wurie and Dr Kebede highlighted ASLM's successes over the past decade including championing and raising the perception and profile of laboratory science in the profession; elevating laboratory systems and structures according to national and international norms and standards; fostering collaboration through global and international partnerships; adopting relevant innovations and best practices in laboratory medicine; and ensuring the African continent has a skilled and sufficient workforce. Both Prof Wurie and Dr Kebede noted that the ASLM2021 conference comes at a crucial moment, a time when applying best practices and lessons learnt will be critical for preventing subsequent waves of COVID-19 transmission or the emergence of other outbreaks.

Key points made by Prof Wurie and Dr Kebede included the following:

- Over the past 10 years, there has been significant progress in strengthening laboratory systems on the continent. This has been achieved, in part, through commitment to implementing the global and continental health goals articulated in [Agenda 2063](#), the [Africa Health Strategy 2016-2030](#), the Sustainable Development Goals and accelerated implementation of [International Health Regulations](#).
- Interventions that can help Africa better prepare for future epidemics include (i) promoting and creating partnership for local manufacturing of diagnostics, e.g., the African Collaborative to Advanced Diagnostics in Africa; (ii) implementing regional integrated surveillance and laboratory networks to promote a collective approach for disease outbreaks, e.g., Africa CDC's Africa Pathogen Genomic Initiative; (iii) integrating laboratory services, especially giving more attention to capacity building for multiplex testing and promoting the implementation of integrated laboratory strategic plans.
- It is very important to empower professional societies to advocate on quality laboratory services, to build capacity, and to share experiences through communities of practice and the standardization of laboratory testing across the continent.

ASLM 10TH ANNIVERSARY RETROSPECTIVE

As ASLM2021 also marked the 10th anniversary of the society, the conference celebrated the many ways in which ASLM has been leading laboratory strengthening across the continent since its inception. The ASLM 10th year anniversary retrospective opened with a [commemorative video](#) and was followed by reflections from Prof Alash'le Abimiku (ASLM, Board Chair and Institute for Human Virology, Nigeria), Mr Nqobile Ndlovu (ASLM), Dr John Nkengasong (Africa CDC), Prof Jean Sakandé (Foundation Mérieux), and Dr Nate Smith (United States Centers for Disease Control and Prevention [US CDC]).

Speakers congratulated ASLM on its 10th year anniversary and acknowledged the commitment and growth of the society over the past decade as the voice for laboratory medicine in Africa. ASLM's success was attributed to key partnerships that have been cultivated since 2011, which continue to steer the continent in addressing infections, diseases and other public health challenges. Speakers emphasised that the quality of laboratory testing will continue to be critical, while also highlighting successes in how COVID-19 pandemic has been managed in Africa.

In concluding the 10th year anniversary retrospective, ASLM CEO Mr Nqobile Ndlovu highlighted that ASLM will continue to focus on (i) facilitating the introduction of innovative technologies, (ii) expanding opportunities for CPD programmes, formal qualifications and in-house trainings for laboratory scientists, (iii) advancing laboratory network capacity, (iv) improving access to diagnostics, (v) advancing quality management systems at all levels and (vi) facilitating information sharing.

Key successes highlighted by the ASLM 10th Anniversary retrospective speakers included the following:

- Through partnerships, the number of accredited laboratories in Africa increased from 28 in 2011 to 134 laboratories in 2021.
- ASLM has provided leadership in improving access to diagnostics on the continent including through creating a [Diagnostic Evidence Hub](#) and support for the process of informing the National Essential Diagnostic List with 35 countries being involved.
- ASLM has established important platforms for communications and advocacy including [Laboratory Strengthening Community of Practice](#) (LabCoP), publications through the [African Journal of Laboratory Medicine](#) and [Lab Culture magazine](#) and service trainings, culminating in the launch of the [ASLM Academy](#).
- ASLM and Africa CDC jointly support the technical areas of antimicrobial resistance and laboratory systems strengthening, as well as biosafety and biosecurity, including the development of a multilingual tool for standardised laboratory biosafety and biosecurity assessment.
- ASLM'S COVID-19 pandemic response has supported ministries of health and Africa CDC staff in Burkina Faso, Liberia, Mali, Malawi and many other countries to improve and expand COVID-19 laboratory diagnostic capacities.

KEYNOTE ADDRESS

Laboratory Networks: Essential Component of Global Health Security and Progress toward the 7-1-7 goal. Dr Tom Frieden



Dr Tom Frieden,
CEO of Resolve to Save Lives

In his keynote address, Dr Tom Frieden, CEO of Resolve to Save Lives, highlighted the critical importance of strong laboratory networks for global health security. Highlighting lessons learnt from COVID-19, Dr Frieden emphasised three key areas we must 'get right' to prevent the next pandemic. These include a stronger public health response, including equitable access to vaccines and other essential tools; stronger primary healthcare systems that can detect and respond to health threats, including laboratory networks for accurate and timely surveillance; and stronger individual and community resilience.

To improve the early detection and rapid control of disease threats, Dr Frieden proposed a new additional metric and target: 7-1-7. This entails that every suspected outbreak is identified within **seven days**; cases are reported publicly, with the initiation of investigation and control within **one day**; and that an effective response, rigorously defined, is mounted within **seven days**. Dr Frieden highlighted the three key aspects of effective public health action needed to bring 7-1-7 into reality. These include political support with funds for improved detection and response; technical rigor and expertise to transform financial resources into functional capacities, including through South-to-South collaborations; and operational excellence through stronger organizations with improved managerial capacity.

Dr Frieden also emphasised that strong laboratory systems are essential for preparedness, detection, and for response to disease outbreaks and recommended the following:

- National and global health policies and regulations need to support resilient laboratory systems and networks. This includes preparing for the next pandemic through implementing science-based policies.
- The national laboratory infrastructure needs to be robust and sustained over time including point-of-care, lateral flow low technology, metagenomics and artificial intelligence. Strengthening capacity for routine healthcare and routine public health activities improves emergency response.
- Data flow within countries and principles-based data sharing among countries are both essential and currently lacking. WHO has launched a technical package called [SCORE](#) to improve data around the world, standardised verifiable indicators and scale up effective data systems.
- There is a need to improve early detection of health threats. This can be accomplished through alignment between public health and political leaders.
- Laboratory workforce development and opportunities for professional advancement should continue. Skills training should occur at every healthcare level, including identifying and nurturing future leadership.
- There is a need to act now on AMR. AMR threatens advances in modern medicine. This call to action does not mean simply inventing new antibiotics, but also better ways to detect antimicrobial resistant organisms, better infection control mechanisms, better vaccines, and better laboratory systems to detect resistant infections quickly.
- Investing in genomics allows for fast, in-depth pathogen characterisation to facilitate targeted, effective control of disease threats. Trusted platforms for routine pathogen data management can support timely and coordinated responses.

OFFICIAL OPENING OF ASLM2021

Mr Nqobile Ndlovu, ASLM CEO, Dr John Nkengasong, Director for the Africa CDC, Dr Tom Frieden, President and CEO of Resolve to Save Lives, Professor Isatta Wurie and Dr Yewen Kebede, co-chairs of the organizing scientific committee, distinguished participants of the ASLM 5th biennial conference and 10th anniversary of ASLM establishment, all protocols observed. First of all, I would like to thank ASLM for inviting me to attend and officially open this 5th biennial 2021 conference and 10th year anniversary of establishment. On behalf of the Federal Democratic Republic of Ethiopia, the Ministry of Health, and myself, I would like to warmly welcome you all to this very important and special event of the society, which will be conducted with a theme of 'Responding to outbreaks to build resilient laboratory systems: Lessons learned from COVID-19'. Our Ministry considers this year's theme of the society's biennial international conference a very timely and relevant recognising that the COVID-19 pandemic remains a public health threat with extraordinary challenges being faced by our continent in responding to the pandemic. This is particularly due to inadequate access to sufficient vaccines, diagnostics, and therapeutics, as well as limited capacity for collecting, analysing, and reporting epidemiological and quality laboratory data, including genomic sequencing data required to continuously monitor and evaluate the pandemic's evolution and devising appropriate public health control strategies and actions.

We would also like to join the ASLM family in celebrating its achievement in championing the cause of laboratory medicine throughout the continent over the last 10 years of its existence. A strong health system, as we all know, is foundational to comprehensively and effectively respond to any public health threat caused by new, emerging and re-emerging infectious pathogens among other service pillars. A strong health system is characterised by a robust and resilient quality laboratory system that has the capacity and capability to promptly detect and characterise the aetiology or the causative agents of outbreaks for appropriate public health responses, including clinical management of the infected and affected, for the mitigation of adverse impacts and containment of wider community transmission. Thus, the crucial role of quality assured laboratory services in response to



Dr Lia Tadesse Gebremedhin,
Minister of Health, Ethiopia

public health emergency situations at times of epidemics and pandemics caused by infectious agents is very clear and cannot be overemphasised.

Surveillance activities and epidemiological studies that are undertaken to provide evidence on the magnitude and distribution of disease outbreaks to guide effective public health interventions are incomplete, if not impossible, without quality laboratory support.

As we all know, the COVID-19 pandemic is currently ravaging the systems, economies, and social wellbeing of populations all over the world and taking lives of millions along the way. The situation in our country and the African continent at large is not different. The critical role and importance of clinical laboratories in a fight against disease outbreaks of pandemic proportions has never been more recognised than this COVID-19 pandemic. In accordance with the guidance and recommendations of the WHO, Ethiopia has early on adopted nucleic acid amplification test in the form of real time reverse transcription polymerase chain reaction, or RT-PCR assay, for the molecular detection of severe acute respiratory coronavirus 2 (SARS-CoV-2) for the purposes of diagnosis, screening, public health surveillance, and epidemiological studies. The Ministry of Health and the Ethiopian Public Health Institute, in collaboration with regional health bureaus, private health service providers, academic and

research institutions, including those in the agriculture and veterinary sectors, have successfully managed to establish more than 82 molecular RT-PCR testing centres starting from March 2020 when the first case of SARS-CoV-2 infection was confirmed in Ethiopia. Although this extended molecular COVID-19 diagnostic laboratory system has been truly serving as the first line of defence against the pandemic, maintaining and sustaining the network at the highest possible level of functionality and productivity has been associated with many constraints. It was therefore found strategically relevant and timely for Ethiopia to introduce and systematically implement highly specific and sensitive, economically affordable, rapid and easy to use point-of-care testing methods that could identify the majority of patients with early active SARS-CoV-2 infection, allowing for immediate public actions to break the chains of transmission of the virus and provide appropriate, timely clinical services.

Thus, Ethiopia embarked on the implementation of antigen testing for rapid diagnosis of SARS-CoV-2 infection following the guidance and recommendations of WHO, while at the same time strengthening the capacity of the national COVID-19 laboratory network for molecular testing as a gold standard diagnostic method. The Ministry of Health and the Ethiopian Public Health Institute have been ardently advocating for the promotion of the laboratory profession and the cognition of laboratory services as an important component of the health system. All along its endeavours over the past several years of promoting the lab system, our country has been enjoying the full support of ASLM which also has a similar vision for the advancement

of laboratory sciences, profession and systems in Africa. At this point in time, we proudly believe that together we surely are achieving the anticipated goal. In addition, Ethiopian Public Health Institute, our National Public Health Institute, has been closely working with ASLM in advancing the quality of laboratory services through a wide range of collaborations in the implementation of multiple laboratory programmes and initiatives particularly in the joint provision of crosscutting laboratory trainings like lab quality management, the Strengthening Laboratory Management Towards Accreditation (SLMTA) laboratory audits and others that are critical inputs for strengthening laboratory systems and enhancing efforts of laboratories towards accreditation to international standards.

As a hosting country of ASLM headquarters and a host for one of the ASLM's collaborating centres, Ethiopia is committed to support and implement ASLM strategic pillars and honoured to always collaborate with ASLM. Furthermore, my Ministry is looking forward to benefiting from the deliberations and outputs of this conference on how to take advantage of investments made for COVID-19 to build more resilient and sustainable laboratory systems going forward. Finally, I would like to express my sincere wishes for a fruitful and very productive fifth biennial conference and ten-year anniversary.

I thank you.

*Dr Lia Tadesse Gebremedhin
Minister of Health, Ethiopia*



Scientific Sessions





The overall theme of ASLM2021 was 'Responding to outbreaks through resilient laboratory systems: Lessons learnt from the COVID-19 pandemic'. The scientific programme had three sub-themes focused on **Outbreak Effect; Laboratory Response and Lessons Learnt; and Ownership, Partnerships and Innovation**. Scientific sessions covered a vast array of rich content presented by invited faculty and distinguished speakers. Topics discussed included the threat of emerging pathogens, the need to strengthen diagnostics services, strategies for diagnostic network optimisation and integration, pathogen genomics, One Health implementation, AMR control, integrated disease surveillance, quality management systems, and laboratory workforce development. Overall, the scientific programme included [three plenary sessions, two special sessions, six symposia, four round tables, 12 abstract-driven sessions \(71 oral presentations\), and a Virtual Exhibit Hall with over 70 e-posters](#). The ASLM2021 conference also gave right to CPD credentials delivered by the University Witwatersrand, Johannesburg in South Africa (see template certificate in the Appendix)

In addition, a total of 27 sponsored satellite sessions were convened, covering a variety of programmatic and disease areas including HIV, syphilis, cervical cancer, malaria and COVID-19.

Satellite session organizers included Abbott, *the African Journal of Laboratory Medicine*, the Association of Public Health Laboratories, Beckman Coulter, Cepheid, the Clinton Health Access Initiative, The Fleming Fund, International AIDS Vaccine Initiative, the Integrated Diagnostics Consortium, the London School of Hygiene and Tropical Medicine, The Merck (Germany) Global Health Institute, Roche Diagnostics, SD Biosensor, Thermo Fisher Scientific, the University of the Witwatersrand and National Health Laboratory Service (NHLS), the United States Agency for International Development (USAID), the US CDC, and the WHO. The complete [ASLM2021 programme schedule](#) is available on the [ASLM2021 website](#).

In addition, the 5th SLMTA Symposium: 'Lasting legacy, pandemic pivots, and the reimagined future', was convened prior to the ASLM2021 Opening Ceremony on 15 November 2021. The programme featured a Keynote Address by Dr Talkmore Maruta (Africa CDC), where he shared examples of how SLMTA had prepared countries for the COVID-19 pandemic. Innovative solutions for converting the traditional in-person classroom curriculum to effective online learning were also discussed. The complete 5th SLMTA Symposium is available on the [SLMTA website](#).

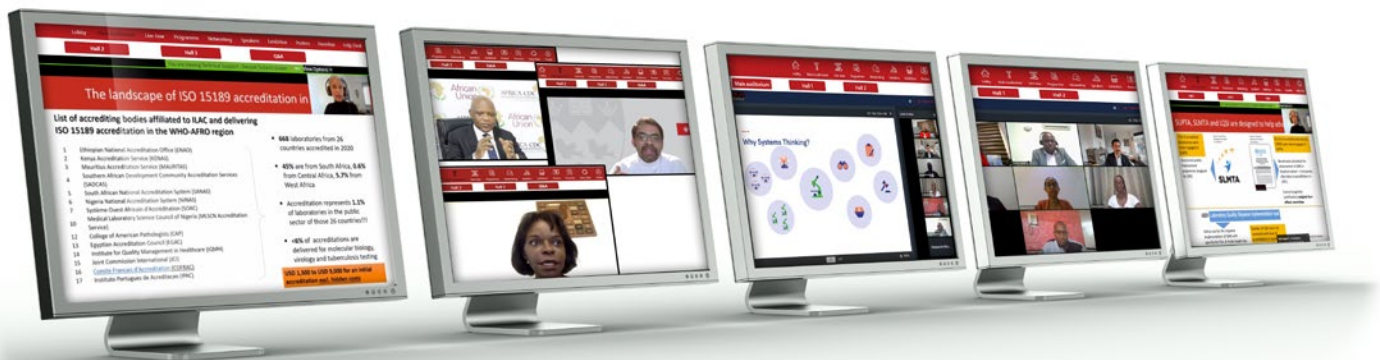
SUB-THEME 1: OUTBREAK EFFECT

The ASLM2021 scientific programme opened with a plenary session focused on the impact of disease outbreaks, including COVID-19, one health and laboratory systems in Africa. The session was chaired by Amanda McClelland (Resolve to Save Lives) and Isatta Wurie (University of Sierra Leone) and plenary speakers included John Nkengasong (Africa CDC), Madukhar Pai (McGill University), and Francine Ntoumi (Fondation Congolaise pour la Recherche Médicale).

	SPEAKERS	TITLE
PLENARY 1: OUTBREAK EFFECT Chairs: Amanda McClelland (Resolve to Save Lives) and Isatta Wurie (University of Sierra Leone)	Dr John Nkengasong (Africa CDC)	The COVID -19 Effect: Adding Insult to Injury
	Madukhar Pai (McGill University)	Is COVID-19 Compromising Global Health Gains: Diagnostics are Key to Recovery
	Francine Ntoumi (Fondation Congolaise pour la Recherche Médicale)	Fighting Outbreaks: A Tale from Central Africa

Dr John Nkengasong provided an overview of the Africa CDC’s role in the pandemic response in the African continent, highlighting six key areas that need more focus: i) public health institutes, ii) public health workforce, iii) regulatory mechanisms, iv) manufacturing of vaccines, diagnostics and therapeutics, v) access to finance, and vi) partnerships. Prof Madukhar Pai illustrated how COVID-19 has worsened pre-existing gaps

in access to healthcare services, reduced gains made in the health sector, and increased poverty. Reflecting on the experience of Democratic Republic of Congo and lessons learned from the COVID-19 pandemic, Prof Francine Ntoumi emphasised the need for strong political leadership and regionalism in coordinating the outbreak response and the critical importance of workforce development.



The opening plenary was followed by a special session, two symposia and two roundtables. Additional details follow below.

SPECIAL SESSION 1:

Democratizing Pathogen Genomics for Disease Surveillance

Co-conveners: Alan Christoffels (Africa CDC) and Nicky Gumede Moeletsi (WHO Regional Office for Africa)

SPEAKERS

Iruka Okeke (University of Ibadan)
Christian Happi (Redeemers University, Nigeria)
Moussa Moise Diagne (Institut Pasteur de Dakar)
Vanessa Moeder (Illumina)
James Brayer (Oxford Nanopore Technologies)
Gavin Cloherty (Abbott)

SYMPOSIUM 1:

Antimicrobial Resistance: The Other Pandemic

Co-conveners: Yewande Halimi (Africa CDC) and Mirfin Mpundu (reACT Africa)

SPEAKERS

Edwin Shumba (ASLM)
Phillip Mathew (ReAct Asia Pacific)
Geetanjali Kapoor (Centre for Disease Dynamics, Economics and Policy)
Marc Mendelson (Groote Schuur Hospital, University of Cape Town)
Gunturu Revathi (The Aga Khan University Hospital, Nairobi)
Otto Cars (ReAct- Action for Antimicrobial Resistance)

SYMPOSIUM 2:

Antimicrobial Resistance: The Thousand Faces of Biosafety in Laboratory Medicine

Co-conveners: Talkmore Maruta (Africa CDC and ASLM) and Maureen Ellis (International Federation of Biosafety Associations)

SPEAKERS

Kazunobu Kojima (WHO)
James Marcomic Maragia (Ministry of Health and Sanitation, Kenya)
Abe Gordon Abias (Ministry of Health, South Sudan)
David Bressler (US CDC)

ROUND TABLE 1:

The Added Value of the One Health Approach in Epidemic Response: Lessons Learnt from the COVID-19 Pandemics

Convener: Arshnee Moodley (International Livestock Research Institute)

SPEAKERS

Wade Abel (Veterinary National Laboratory of Cameroon)
Tesfaye Rufael Chibssa (National Animal Health Diagnostic and Investigation Center, Ethiopia)
Talkmore Maruta (Africa CDC and ASLM)
Edward Okoth (International Livestock Research Institute)
Monica Musenero (Ministry of Science, Uganda)

ROUND TABLE 2:

Systems Approach and Coordination in Outbreak Response: Can we do better?

Marguerite Massinga Loembé (Africa CDC and ASLM) and Christina Mwangi (CDC Uganda)

SPEAKERS

Ludovic Fiomona Tamadea (Economic Community of Central African States Regional Disease Surveillance Systems Enhancement Project IV)
Etoundi Mballa (Ministry of Health, Cameroon)
Elsie Ilori (Nigeria Centre for Disease Control)
Elvire Mbongo Kama (Gahouma High Capacity Laboratory, Gabon)
Emmanuel Omony (Mildmay Uganda Hospital)
Prossy Mbabazi (Central Public Health Laboratory, Uganda)
Chris Lee (Resolve to Save Lives)

Key highlights from the plenary, special session, symposia, and roundtables are noted below.

- Public health must re-assess the value of old strategies and paradigms. One of the greatest lessons learned by Africa is the need to invest in its healthcare systems and create a [new public health order](#) and public health renaissance as critical to secure the health of our people and continent. This includes the message that the moment for African leadership and equality in collaborations is now.
- The pandemic created a renewed investment case for new, better funded approaches to laboratory system strengthening.
- Innovation is the key to resilient health systems and humans should remain at the core of technological advances.
- Genomics is a foundational tool for infectious disease surveillance and management. Successful expansion of genome sequencing will be measured by country capacity to take the lead in implementing their own research.
- Taking lessons from the AMR survey in Africa, which showed that only 1.3% of national laboratory networks actually perform antibiotic susceptibility testing, there is a need to expand bacteriology services below the secondary/intermediate care level, including QMS and accreditation in bacteriology laboratories.
- Countries were urged to adopt the risk-based approach to managing biosafety and biosecurity risks as guided by the [WHO Laboratory Biosafety Manual](#). Multisector coordination and collaboration at the national level in addressing biosafety challenges and strategies to manage biomedical and other waste is required.
- Human health cannot handle this pandemic alone. A One Health approach, including environmental, animal and human health interventions, is needed to control zoonotic infections transmitted between from animals to humans. This includes intensifying surveillance in animal conservation areas that are likely to places for pathogen transfer or 'zoonotic spillover'.
- Systems approach and coordination should move from working in isolation to collaborative relationships, from working in silos to an emergence approach and moving from a singular analysis approach to holistic synthesis approach. Examples shared included East African coordinated data results management for cross border travel.



ORAL ABSTRACT SESSIONS AND E-POSTERS

For the Outbreak Effect sub-theme, there were four scientific tracks consisting of four oral abstract sessions (six presentations each) and 36 e-posters. The scientific tracks as well as the chairs for each of the oral sessions are noted below and additional information is available in the [abstract book](#).

OUTBREAK EFFECT SUB-THEME	# SCIENTIFIC TRACKS AND CHAIRS FOR ORAL ABSTRACT SESSIONS	
	1	Outbreaks, Emerging Pathogens and Disease Burden Chairs: Nadine Abiola (ASLM) and Marguerite Massinga Loembé (ASLM and Africa CDC)
	2	The Role of Laboratories in Outbreak Preparedness and Response Chairs: Francesco Marinucci (Abbott) and Beatrice van der Puije (ASLM)
	3	The Threat of Antimicrobial Resistance Chairs: Geetanjali Kapoor (Center For Disease Dynamics, Economics and Policy) and Richard Walwema (Infectious Diseases Institute, Uganda)
	4	Policy and Regulation for Resilient Laboratory Systems and Networks Chairs: Karidia Diallo (US CDC) and Tjeerd Datema (DATOS)

SATELLITE SESSIONS

Ten satellite sessions were also convened on the first full day of the conference covering a variety of programmatic and disease areas including HIV, cervical cancer and COVID-19.

#	TITLE / SPONSOR
1	COVID-19 – The Right Test at the Right Time / Roche Diagnostics
2	How to Maximise Public Health Laboratory Impact by Visualizing, Analysing and Optimizing the Diagnostic Network / Integrated Diagnostics Consortium
3	The Abbott Pandemic Defense Coalition “Learning from the Past to Protect our Future” / Abbott
4	Equipping Laboratories for Performing Robust Evaluations of COVID-19 Diagnostics Under Emergency use Authorisation: Lessons Learnt from South Africa / University of the Witwatersrand and National Health Laboratory Service
5	Scaling up Cervical Cancer Screening in the COVID Context / Hologic
6	Comparative Evaluation and User Experience with the Alinity m HIV-1 Assay in Europe, South Africa and Australia / Abbott
7	Beckman Coulter Life Sciences Satellite Session / Beckman Coulter Life Sciences
8	Introducing PAVON and Merck’s Malaria Microscopy Education / The Merck (Germany) Global Health Institute
9	African Journal of Laboratory Medicine Manuscript Writing Workshop / ASLM
10	Strengthening PEPFAR-Supported Public Health Laboratory Systems and SARS-COV-2 Adaptation / United States Centers for Disease Control and Prevention

SUB-THEME 2: LABORATORY RESPONSE AND LESSONS LEARNT

The second day of the ASLM2021 scientific programme focused on the laboratory response and lessons learnt within the context of the COVID-19 pandemic. The plenary was chaired by Heather Alexander (US CDC) and Fatim Cham-Jallow (The Global Fund). Plenary speakers included Pascale Ondoa (ASLM), Wendy Stevens (University of the Witwatersrand and NHLS), and Peter Sands (The Global Fund).

	SPEAKERS	TITLE
PLENARY 2: LABORATORY RESPONSE AND LESSONS LEARNT Chairs: Heather Alexander (US CDC) and Fatim Cham-Jallow (The Global Fund)	Pascale Ondoa (ASLM)	Fighting War and Bring the Peace: The Way Towards Resilient Laboratory Systems
	Wendy Stevens (University of the Witwatersrand and NHLS)	Diagnostics at the Forefront
	Peter Sands (The Global Fund)	Access and Equity to Combat Health Threats: The ACT-A Initiative

Dr Pascale Ondoa examined how to achieve resilient laboratory systems by highlighting gains, successes, and challenges for quality assurance during the response to COVID-19. This included a call to reset quality management systems to be the core of laboratory system strengthening. Prof Wendy Stevens highlighted that the new global order for diagnostics require speed, expansion of point-of-care testing, active patient engagement and public-private engagements. Prof Stevens added that to ensure ongoing improvement in disease diagnostics, there is a need to continue to strengthen effective diagnostic systems

between academia, regulators, innovators, industry and implementers. Finally, Mr. Peter Sands examined the role of the Access to COVID-19 Tools Accelerator (ACT-A) initiatives, which include diagnostics, treatment, vaccines and health system strengthening. He shared successes including COVID-19 Response Mechanism funding to support workforce recruitment, procurement of personal protective equipment, scale-up of testing by procuring PCR and antigen tests and leveraging existing laboratory infrastructure for COVID-19.

The plenary was followed by a special session, two symposia, and two roundtables. Additional details are listed below:

SPECIAL SESSION 2: Bringing the Diagnostics that Count into Routine Testing Services Co-conveners: Kenneth Fleming (Lancet Commission on Diagnostics) and Iruka Okeke (University of Ibadan)	SPEAKERS	
	Lee Schroeder (University of Michigan)	
	Prashant Yadav (Center for Global Development and INSEAD)	
	Linda Oskam (DATOS)	
SYMPOSIUM 3: Bringing Laboratory Quality to the Next Level Co-conveners: Patrick Mateta (Clinical and Laboratory Standards Institute) and Fausta Mocha (World Health Organization, Regional Office for Africa)	SPEAKERS	
	Tjeerd Datema (DATOS)	
	Beatrice van der Puije (ASLM)	
	Marcel Gbaguidi (West African Accreditation System)	
	Victor Waddell (Clinical and Laboratory Standards Institute)	

SYMPOSIUM 4:**Digital Technology and Diagnostic Revolution**

Co-conveners: Karen Heichman (Bill & Melinda Gates Foundation) and Smijlka de Lussigny (UNITAID)

SPEAKERS

Dino Rech (Audere)
Wendy Stevens (University of Witwatersrand and NHLS)
Angela Siteyi (PharmAccess, Kenya)
Jennifer Anderson (ASLM)

ROUND TABLE 3:**Are Health Data Informing Public Health Action?**

Co-conveners: Mohammed Abdulaziz (Africa CDC) and Abhdouramane Sow (West African Health Organization)

SPEAKERS

Djibril Dione (Health Information Systems Program, SA)
Karl Schenkel (WHO)
Awoke Temesgen (Institute of Health Metrics and Evaluation)
Andreas Gilsdorf (Deutsche Gesellschaft Für Internationale Zusammenarbeit)
Deepak Batra (IQVIA)
John Sterling (WHONET)

ROUND TABLE 4:**Workforce Development in “the new normal”:
Are we doing it right?**

Co-conveners: Anafi Mataka (ASLM) and Tim Trevan (Chrome Biorisk Management LLC)

SPEAKERS

Susan Kiwanuka (Makerere University School of Public Health, Uganda)
Clarence Chaffee (The Caviart Group)
Juliet Bryant (The Global Fund)
Aaron Shibemba (Ministry of Health, Zambia)
Wendy Stevens (University of Witwatersrand and NHLS)

Key highlights from the plenary, special session, symposia, and roundtables included:

- Innovations, new paradigms and new actors have emerged during the response to the COVID-19 pandemic. They can revolutionise workforce development, quality management systems, the public health response and access to diagnostics in general.
- The power of collaboration in mobilising and pooling resources, tools, and strategies are key to collectively improve our systems and to respond to pandemics. Africa has a leadership role to play.
- We need 40 million tests per month to cover the COVID-19 testing needs of Africa. Lock-down and top-down approaches will not help. Bringing testing to the community, scaling up molecular testing, test and treat programmes, and syndromic testing strategies are the way forward.
- Next steps for laboratory quality management systems include building national quality infrastructure, e.g., national accreditation bodies, laboratory licencing systems, skilled workforce, national External Quality Assessments programmes and calibration centres. This can be guided by Africa CDC guidance’s for [Establishing a National Laboratory Quality Framework](#).
- Surveillance data is not linked to contextual information which is needed to move to public health action. There is a need to harmonise different data systems, build infrastructure and political support, develop functional data regulatory bodies through policies, and use artificial intelligence to generate data that inform public health systems.
- Added value for workforce development should cover health profession councils, tertiary education and CPD. The remote training that has helped bridge the knowledge gap during the pandemic should also be continuously improved.

ORAL ABSTRACT SESSIONS AND E-POSTERS

For the Laboratory Response and Lessons Learnt sub-theme, there were four scientific tracks with four oral abstract sessions (six presentations each) and 12 e-posters.

LABORATORY RESPONSE AND LESSONS LEARNT SUB-THEME	# SCIENTIFIC TRACKS AND CHAIRS FOR ORAL ABSTRACT SESSIONS	
	1	Strengthening Laboratory Systems and Networks for Routine and Emergency Chairs: Nadine Abiola (ASLM) and Shirley Lecher (US CDC)
	2	Workforce Development and the Laboratory Profession Chairs: Nicolas Steenkeste (Fondation Mérieux) and Suzanne Kiwanuka (Makerere University School of Public Health, Uganda)
	3	Science and Technology to Support Cost-effective and Integrated Laboratory Networks Chairs: Paolo Maggiore (CHAI) and Anafi Mataka (ASLM)
	4	Pathogen Genomics to Control Diseases Chairs: Sikhulile Moyo (Botswana–Harvard AIDS Institute Partnership and Harvard T.H. Chan School of Public Health) and Gerald Mboowa (Makerere University College of Health Sciences)

SATELLITE SESSIONS

Ten satellite sessions book ended the second full day of the conference and covered a variety of topics including diagnostic testing evaluations and options for leveraging available diagnostic equipment; mapping antimicrobial resistance; and optimising data management.

#	TITLE / SPONSOR
1	Leveraging GeneXpert Systems in Response to Changing Public Health Needs / Cepheid
2	Beyond DNO: The Changing Landscape of Laboratory Services / USAID Global Health Supply Chain Program-Procurement and Supply Management (GHSC-PSM) project
3	Launch of the Cobas® 5800 System: Accessible Innovation to Enable Multi-disease Testing / Roche Diagnostics
4	Mapping Antimicrobial Resistance and Antimicrobial use in Africa: Outcomes, Lessons Learnt, Implications and Opportunities / Fleming Fund and ASLM
5	First In-field Evaluation of STANDARD M10 RT-PCR for the Rapid Detection of SARS-CoV-2: Preliminary Results / SD Biosensor
6	Leading Tests for the Emergency Laboratory: Beckman Coulter High Sensitive Tnl and Procalcitonin / Beckman Coulter
7	Monitoring National Priority Programmes through a Centralised National Data Command Centre: Our Journey and Lessons Learnt from South Africa / National Priority Programmes (NPP) of the National Health Laboratory Service, Department of Molecular Medicine & Haematology, School of Pathology, Faculty of Health Sciences, University of the Witwatersrand
8	Remote Next Generation Sequencing Training for SARS-CoV-2: Thinking Inside and Outside the Box / Association of Public Health Laboratories
9	Accelerating Access to Diagnostics / London School of Hygiene and Tropical Medicine and Chatham House, UK
10	Increasing Access to Dual HIV/Syphilis Rapid Tests to Accelerate Progress Towards Elimination of Congenital Syphilis / Clinton Health Access Initiative, Inc

SUB-THEME 3: OWNERSHIP, PARTNERSHIP AND INNOVATION

The final day of the ASLM2021 scientific programme focused on the themes of national ownership, partnership and innovation. The plenary was chaired by Robert Matiru (UNITAID) and Zameer Brey (Bill & Melinda Gates Foundation). Plenary speakers included Linda-Gail Bekker (Desmond Tutu HIV Foundation), Sergio Carmona (FIND), and Amadou Sall (Institut Pasteur de Dakar).

	SPEAKERS	TITLE
PLENARY 3: OWNERSHIP, PARTNERSHIP and INNOVATION Chairs: Robert Matiru (UNITAID) and Zameer Brey (Bill & Melinda Gates Foundation)	Linda-Gail Bekker (Desmond Tutu HIV Foundation)	What about Us?
	Sergio Carmona (FIND)	Transforming Diagnostics to Address Health Needs
	Amadou Sall (Institut Pasteur de Dakar)	Manufacturing in vitro Diagnostics in Africa: Making the Dream a Reality

Prof Linda-Gail Bekker discussed community-based interventions in South Africa that support effective and sustainable healthcare services. These include community's role in advocacy for improved services; education and information, as well as activism. Dr Sergio Carmona examined new paradigms and strategies to transform diagnostics through innovation in order to address health needs to their full potential. Dr Carmona highlighted three key pillars to address health needs: (i) leadership, (ii) accelerated development and access to game changing technology, e.g., next generation sequencing, and (iii) digitisation of diagnostics coupled with strategies that empower

communities and individuals to adopt self-care. Finally, Dr Sall explored the possibilities for manufacturing diagnostics in Africa by presenting the success of the Institut Pasteur de Dakar in setting up in-vitro diagnostics via innovative business models and collaborations. Dr Sall further added that it is of no use to have a good test that is not affordable and accessible. Reducing cost should be a multi-effort by government, regulators, partners and private players.

The plenary was followed by two symposia, as noted below.

SYMPOSIUM 5:

Laboratory Mapping and Optimizing Laboratory Networks, Systems and Functions

Co-conveners: George Alemnji (Office of the United States Global AIDS Coordinator and Health Diplomacy) and Kameko Nichols (The Nichols Group)

SPEAKERS

Michael Maina (ASLM)
Christina Mwangi (Uganda CDC)
Powell Choonga (Ministry of Health, Zambia)
Tanaka Sakubani (Ministry of Health, Zimbabwe)
McPaul Okoye (Nigeria CDC)

SYMPOSIUM 6:

All Hands on Deck to Improve Integrated Disease Surveillance and Response

Co-conveners: Thomas Nyirenda (European & Developing Countries Clinical Trials Partnership) and Leonard Peruski (US CDC)

SPEAKERS

Aliou Barry (Institut Pasteur de Dakar)
Raji Tajudeen (Africa CDC)
Mohammed Lamorde (Infectious Diseases Institute, Uganda)
Eili Klein (Center For Disease Dynamics, Economics and Policy)

Key highlights from the plenary and symposia are noted below.

- It takes a village to build resilient laboratory systems; communities, private sector, governments, industry, academia, One Health actors, funders and health professionals are all needed at the table.
- Among those, communities and the private sector bring unique value to advancing laboratory services and diagnostics.
- The new normal for laboratory systems will be towards the consolidation of robust laboratory networks and systems to support point-of-care testing.
- The production of medical products in Africa, by Africans, is the way to unlock access to essential diagnostic for all. Equitable collaboration will help us bridge the gap to a healthy Africa.
- Regional integrated disease surveillance is required. Key successes discussed included Africa CDC's launch of the [Institute of Pathogen Genomics Initiative](#) to investigate and inform outbreak response and rapid scale up of diagnostic capacity for COVID-19.
- Diagnostic capacity mapping, diagnostic network optimisation (DNO), and route optimisation are critical for answering questions about integration/multiplexing, specimen referral design and routing. Integrated stakeholder engagement and improved coordination during planning is vital to integrated network design and determining optimal routing.

ORAL ABSTRACT SESSIONS AND E-POSTERS

For the Ownership, Partnership and Innovation sub-theme, there were four scientific tracks with four oral abstract sessions (six presentations each) and a total of 12 e-posters.

OWNERSHIP, PARTNERSHIP AND INNOVATION SUB-THEME	# SCIENTIFIC TRACKS AND CHAIRS FOR ORAL ABSTRACT SESSIONS	
	1	Research for Better Laboratory Systems and Networks Chairs: Linda Oskam (DATOS) and Collins Odhiambo (ASLM)
	2	Partnership, Policy and Regulation to Improve Access and Equity of Diagnostic Tools Chairs: Francesco Marinucci (Abbott) and Anafi Mataka (ASLM)
	3	Harnessing the Power of Community Chairs: Helen Etya'ale (International Treatment Preparedness Coalition) and Suzanne Kiwanuka (Makerere University School of Public Health, Uganda)
	4	The One Health Approach to Shape New Laboratory Systems Chairs: Renuka Gadde (Clinton Health Access Initiative) and Beatrice van der Puije (ASLM)

SATELLITE SESSIONS

Seven satellite sessions were convened prior to the plenary on the final day of the conference, covering various topics including the role of diagnostic system strengthening and insights for improving HIV and HPV diagnosis and testing.

#	TITLE / SPONSOR
1	Increasing Access and Efficiency of Diagnostic Networks using OptiDx- an Open-access Network Analytics Tool / Integrated Diagnostics Consortium
2	Diagnostic System Strengthening: Harnessing the Power of Community / Roche Diagnostics
3	HIV-1 Genotyping Targeting Integrase - Perspectives on Antiretroviral Drug Resistance Surveillance across Africa / Thermo Fisher Scientific
4	The Role of Diagnostic Integration in Strengthening Laboratory Systems / ASLM Laboratory System Strengthening Community of Practice (LabCoP)
5	COVID-19 Across Africa - Combating the Impact of Emerging Variants of SARS-CoV-2 / Thermo Fisher Scientific
6	Improving Quality of HIV diagnosis: Do You Know How to Update Your HIV National Testing Algorithms? / World Health Organization
7	Implementation of HPV Testing Across Africa: Practical Partnering and Experience Sharing to Help Achieve the WHO 2030 Cervical Cancer Elimination Targets / Roche Diagnostics



Closing Ceremony and Awards Ceremony



CLOSING CEREMONY

Conference co-chair Dr Yenew Kebede opened the Closing Ceremony of ASLM2021 with high-level reflections on key themes and insights that emerged through three and a half days of rich discussion and debate. Rapporteurs, Dr Collins Odhiambo, Dr Nadine Abiola and Dr Talkmore Maruta, then summarized key highlights from each day, organized by sub-theme followed by the Master of Ceremonies, ASLM's Beatrice van der Puije who presented the ASLM2021 conference awards. Mr Nqobile Ndlovu, ASLM CEO, then offered his closing remarks and the Call to Action. Finally, conference co-chair, Prof Isatta Wurie, officially closed ASLM2021.

CALL TO ACTION

1. Build and consolidate our laboratory networks and systems to support outbreak preparedness and Universal Health Coverage. We commit to supporting the 7-1-7 (i.e., seven days to detect, one day to inform/report and seven days to implement response), a target proposed by Dr Frieden during the Opening Ceremony. We will continue to support diagnostic network optimization strategies and promote diagnostic integration in support of access to essential diagnostics at all levels.
2. Transform the implementation of quality management systems, including biosecurity, to reach out to all laboratory and testing facilities, following the all-inclusive One Health approach. This will be achieved through redesigned QMS programmes that are led by countries, and that connect the dots between technical testing capacity, compliance to quality standards and national licensing systems.
3. Given the critical role of the private sector, civil society and communities in access and demand for diagnostics, we will set out to pro-actively engage these important actors into conversations, partnerships and assessments of diagnostic programmes and strategies. We should use our model of engagement successfully developed through the ASLM LabCoP.
4. Continue to expand the pool of skilled and competent laboratory workers to respond to different challenges in Africa, build sustainable careers and advance towards well-defined staffing norms. We will do this through structured approaches embracing CPD, formal qualification and certification programmes owned by Africa.
5. Intensify our support for the scale up of solutions and innovations supporting testing services and diagnostics, such as those that emerged to respond to the COVID-19 crisis. Among other strategies we will continue to support the simplification of regulatory approval processes, and the evidenced-based implementation of innovations. We will also continue working with our partners to promote the local production of diagnostics in order to reduce the dependency of Africa to external sources of medical products and support the achievement of the Africa health agenda.



AWARDS CEREMONY

LABORATORIES AWARDED INTERNATIONAL ORGANISATION FOR STANDARDISATION 15189 ACCREDITATION, 2020-2021

The awards ceremony began with recognition of the 578 laboratories in Africa that achieved accreditation to International organisation for Standardisation 15189 in 2020 and 2021. ASLM salutes the many laboratories across the continent that achieved this standard of excellence!

NUMBER OF ACCREDITED LABORATORIES



ASLM ACADEMY AWARD FOR BEST ABSTRACT

Ms Varsetile Varster Nkwinika, MSc, a doctoral candidate from the South African Vaccination and Immunisation Centre was awarded the ASLM Academy Award for Best Abstract for her abstract submitted to the ASLM2021 Conference entitled **'Human Papillomavirus Infections and The Impact of Viral Load In Women Attending the Gynecology Clinic at Dr George Mukhari Academic Hospital, South Africa'**.

Ms Nkwinika's research on biomarkers of cervical cancer progression addresses a significant public health threat not only to women in South Africa, but also elsewhere on the continent. This research has the potential to improve patient follow up and reduce excess treatment, ultimately contributing to preventing the development of cervical cancer. This abstract further convincingly demonstrates that diagnostic research and development can be driven from the continent. Ms Nkwinika is an inspiration to her peer laboratory professionals. Congratulations!



Ms Varsetile Varster Nkwinika, MSc,
South African Vaccination and Immunisation Centre

OUTSTANDING CONTRIBUTION TO LABORATORY MEDICINE IN AFRICA AWARD

Dr John Nkengasong, Director of the Africa CDC, was awarded the Outstanding Contribution to Laboratory Medicine in Africa Award. Earlier in 2021, he was appointed as one of the WHO Director-General's Special Envoys on COVID-19 Preparedness and Response. Dr Nkengasong has received numerous awards for his work including: the Sheppard Award, The William Watson Medal of Excellence (the highest recognition awarded by the US CDC) The Bill and Melinda Gates Foundation's 2020 Global Goalkeeper, the African Public Health Champion of the Year 2020, as well as the 2021 Boris Mints Institute Prize for Global Challenges for his vital contribution to Africa's response to COVID-19.

In addition, Time Magazine named Dr Nkengasong in its 2021 TIME100 List of Most Influential People, stating, 'John Nkengasong is a modern-day African hero. Through his work as the founding director and leader of the Africa Centres for Disease Control and Prevention, he has helped save lives during the COVID-19 pandemic. He has also been an essential voice in calling for greater (and more equitable) access to vaccines.' Under John, the institution has become a trusted source of scientific knowledge on the continent and abroad. He has trained and empowered young African scientists to serve during the pandemic and supported a strong network of CDCs throughout the region. His work has led to improved testing, better provision of COVID-19 tools—especially vaccines—and a more transparent approach to sharing COVID-19 data by all African countries.



Dr John Nkengasong,
Director of the Africa CDC

LIFETIME ACHIEVEMENT AWARD

Dr Eileen Burke, a Laboratory Specialist with The Global Fund, was awarded ASLM's Lifetime Achievement Award. In 2015, Dr Burke joined The Global Fund, as the first and only laboratory adviser within the organization, bringing with her over 25 years of experience working on laboratory services and systems in resource-limited settings. Dr Burke retired from the Global Fund in January 2022, after a long distinguished career championing the development of integrated laboratory systems and services.

During her time at The Global Fund, Dr Burke helped to pioneer the use of catalytic funds to support integrated laboratory systems and fought to ensure that laboratory systems and services remain integral to Global Fund grant-making. She developed laboratory systems strengthening interventions and supported strategic systems components, such as integrated sample transport, laboratory information management systems, improved equipment maintenance, waste management, quality systems, and more.

Thanks to her work, Global Fund investments in laboratory systems continue to receive attention. She has tirelessly advocated to break down the barriers of siloed vertical disease programmes, helped raise awareness of cost-effective innovations, and fearlessly highlighted problems and short-comings wherever she saw them – but always in the most supportive and constructive manner.

Dr Burke could always be counted on to raise a voice of pragmatic common sense, informed by technical expertise and supported by data, inspired by good humour, and grounded in commitment to make a difference. Recently, she responded to a request for the LabCoP session at ASLM2021, confirming the following: 'I will be happy to take the session on integration as it's a topic close to my heart.'

We salute the marvellous record of Eileen Burke's contributions and wish her all the best in her next adventures!



Dr Eileen Burke,
Laboratory Specialist, The Global Fund



In memory of

Dr Saladin Osmanov



*Senior Scientific Advisor for Research & Development,
Abbott Diagnostics*

Dr Osmanov was a great scientist,
a tireless supporter of strong laboratory system across the world
and a true gentleman.

ASLM is grateful for the opportunity to have worked with him.
He will be missed.

APPENDIX A

PROGRAMME AT A GLANCE. The detailed descriptions for all seminars can be found [here](#).

					
		Monday 15 November 2021	Tuesday 16 November 2021	Wednesday 17 November 2021	Thursday 18 November 2021
			Outbreak Effect	Laboratory Response and Lessons Learnt	Ownership, Partnerships and Innovation
			EXHIBIT AND POSTER HALL (10:30am – 5:00pm)	EXHIBIT AND POSTER HALL (10:30am – 5:00pm)	EXHIBIT AND POSTER HALL (10:30am – 2:30pm)
7:00 am			SATELLITE SESSION (7:00am – 8:00am)	SATELLITE SESSION (7:00am – 8:00am)	SATELLITE SESSION (7:00am – 8:00am)
8:00 am			SATELLITE SESSION (8:00am – 9:00am)	SATELLITE SESSION (8:00am – 9:00am)	SATELLITE SESSION (8:00am – 9:00am)
9:00 am			PLENARY (9:00am – 10:30am) Session Chairs: Amanda McClelland (Resolve to Save Lives) Isabella Welle (University of Sierra Leone) Speakers: The COVID-19 effect: adding insult to injury John Nkengasong (Africa Centres for Disease Control and Prevention) Is COVID-19 compromising Global Health gains: diagnostics are key to recovery Madubakar Pai (MGI University) Fighting outbreaks: a tale from Central Africa Francine Nzouli (Fondation Congolaise pour la Recherche Medicale)	PLENARY (9:00am – 10:30am) Session Chairs: Haithem Alexander (United States Centers for Disease Control and Prevention) Felix Chan (The Global Fund) Speakers: Fighting war and bring the peace: the way towards resilient laboratory systems Pascaline Onkya (African Society for Laboratory Medicine) Diagnostics at the forefront Wesley Stevens (University of the Witwatersrand) Access and equity to combat health threats: the ACTA initiative Peter Seeds (The Global Fund)	PLENARY (9:00am – 10:30am) Session Chairs: TBD Peter Erhenkreuzer (Bill & Melinda Gates Foundation) Speakers: What about us? Linda-Gail Bekker (Dorland Futsi HIV Foundation) Transforming diagnostics to address health needs Sergio Carreras (Foundation for Innovative New Diagnostics) Manufacturing in vitro diagnostics in Africa: making the dream a reality Amadou Sall (Institut Pasteur de Dakar)
9:30 am	SLMFA SYMPOSIUM (9:30 am–1:00pm) Co-conveners: United States Centers for Disease Control and Prevention African Field Epidemiology Network				
10:30 am			BREAK (10:30am – 11:00am)	BREAK (10:30am – 11:00am)	BREAK (10:30am – 11:00am)
11:00 am			ORAL ABSTRACT PRESENTATIONS (11:00am – 12:30pm) 1. Oral abstract track #1 2. Oral abstract track #2 3. Oral abstract track #3	ORAL ABSTRACT PRESENTATIONS (11:00am – 12:30pm) 1. Oral abstract track #1 2. Oral abstract track #2 3. Oral abstract track #3	ORAL ABSTRACT PRESENTATIONS (11:00am – 12:30pm) 1. Oral abstract track #1 2. Oral abstract track #2 3. Oral abstract track #3
12:30 pm			SPECIAL SESSION 1 (12:30pm – 2:00pm) Democratizing pathogen genomics for disease surveillance Co-conveners: Prof. Alan Christoff (Africa Centres for Disease Control and Prevention) Nicky Gamble Mowbray (World Health Organisation, Regional Office for Africa) Speakers: TBD	SPECIAL SESSION 2 (12:30pm – 2:00pm) Bringing the diagnostics that count into routine testing services Co-conveners: Research Funding (United Commission on Diagnostics) Inoka Onke (University of Ibadan) Speakers: TBD	SYMPOSIUM 4 (12:30pm – 2:00pm) Symposium 5: Laboratory mapping and optimizing laboratory networks, systems and functions Co-conveners: George Akhavan (Office of the United States Global AIDS Coordinator and Health Diplomacy) Kamello Ntshiri (The Ntshiri Group) Speakers: TBD
2:00 pm	OPENING CEREMONY (2:00pm – 4:00pm) Welcome and Conference Objectives Isabella Welle (University of Sierra Leone, Conference co-chair) Yusem Kabode (Africa Centres for Disease Control and Prevention, Conference co-chair) Strategic Partner Remarks ASLM 10th Anniversary Retrospective Ngelile Ndlovu (African Society for Laboratory Medicine, Chief Executive Officer) Abasiye Ndabanda (African Society for Laboratory Medicine, Board Chair, Institute for Human Virology, Nigeria, Professor) John Nkengasong (Africa Centres for Disease Control and Prevention, Director) Keynote Address Tom Frieden (Resolve to Save Lives, Chief Executive Officer) Opening of the Conference Honorable Lia Tadesse Gebremedhin (Minister of Health, Ethiopia) Sponsored by: TBD	BREAK (2:00pm – 2:30pm)	BREAK (2:00pm – 2:30pm)	BREAK (2:00pm – 2:30pm)	BREAK (2:00pm – 2:30pm)
2:30 pm			SYMPOSIUM 1 (2:30pm – 4:00pm) Symposium 1: Antimicrobial resistance: the other pandemic Co-conveners: Trevoranda Hallett (Africa Centres for Disease Control and Prevention) Melika Myamba (iACT Africa) Speakers: TBD	SYMPOSIUM 2 (2:30pm – 4:00pm) Symposium 2: Bringing laboratory quality to the next level Co-conveners: Patrick Maranda (Clinical and Laboratory Standards Institute) Fausta Ndebe (World Health Organisation, Regional Office for Africa) Speakers: TBD	SYMPOSIUM 3 (2:30pm – 4:00pm) Symposium 3: Bringing laboratory quality to the next level Co-conveners: Patrick Maranda (Clinical and Laboratory Standards Institute) Fausta Ndebe (World Health Organisation, Regional Office for Africa) Speakers: TBD
4:00 pm			SYMPOSIUM 2 (2:30pm – 4:00pm) Symposium 2: The thousand faces of biosafety in laboratory medicine Co-conveners: Takwene Marita (Africa Centres for Disease Control and Prevention; African Society for Laboratory Medicine) Mareen Ellis (International Federation of Biosafety Associations) Speakers: TBD	SYMPOSIUM 4 (2:30pm – 4:00pm) Symposium 4: Digital technology and diagnostic revolution Co-conveners: Karen Neichman (Bill & Melinda Gates Foundation) Lisa Orsillo (Digital Center for Disease Control) Speakers: TBD	SYMPOSIUM 5 (2:30pm – 4:00pm) Symposium 5: All hands on deck to improve Integrated Disease Surveillance and Response Co-conveners: Thomas Nkomo (European & Developing Countries Clinical Trials Partnership) Leonard Ponsam (United States Centers for Disease Control and Prevention) Speakers: TBD
5:30 pm			DEBATES & ROUND TABLES (4:00pm – 5:30pm) Round table 1: The added value of the One Health approach in epidemic response: lessons learnt from the COVID-19 pandemics Co-conveners: Arshad Moolay (International Livestock Research Institute) Serge Ntshung (United Nations Food and Agriculture Organization) Round table 2: Systems approach and coordination in outbreak response: can we do better? Co-conveners: Marguerite Mawinga Lereba (Africa Centres for Disease Control and Prevention; African Society for Laboratory Medicine) Christina Mwangi (United States Centers for Disease Control and Prevention; Uganda Country Office)	DEBATES & ROUND TABLES (4:00pm – 5:30pm) Round table 3: Are Health data informing public health action? Co-Conveners: Muhammad Abd-Aziz (Africa Centres for Disease Control and Prevention) Abdourahmane Saw (African Health Organization) Round table 4: Workforce development in "the new normal": are we doing it right? Co-conveners: Asaah Mutaka (African Society for Laboratory Medicine) Tin Trevas (Diverse Biotech Management LLC)	
5:30 pm			BREAK (5:30pm – 6:00pm)	BREAK (5:30pm – 6:00pm)	
6:00 pm			SATELLITE SESSION (6:00pm – 7:00pm)	SATELLITE SESSION (6:00pm – 7:00pm)	
7:00 pm			SATELLITE SESSION (7:00pm – 8:00pm)	SATELLITE SESSION (7:00pm – 8:00pm)	



APPENDIX B

CPD CERTIFICATE SAMPLE



ENDORSERS



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Special thanks to [Shocklogic](#), ASLM2021's virtual conference and event management provider. Shocklogic created a virtual conference interface and app for attendees and participants to manage their ASLM2021 experience. Registrants were able to easily log in and navigate the event through a virtual lobby and access special features and recordings of sessions weeks after the event concluded.

