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Ten Minutes with Dr. Alash’le Abimiku, ASLM2012 Plenary Speaker
ASLM-Botswana Launched in Gaborone
AN INVITATION TO ATTEND THE ASLM2012 CONFERENCE SATELLITE SESSIONS

ASLM2012, the Society's first international meeting to take place from 1-7 December in Cape Town, South Africa, is fast approaching. Besides the main plenary and ancillary sessions, the conference will consist of up to 28 satellite symposia and industry workshops, to be hosted from 1-3 December at the Cape Town Convention Centre. These informational sessions will cover the following topic areas:

◦ Successful case studies on the creation of sustainable quality medical laboratory services in resource-constrained environments
◦ The latest methods, products and instrumentation from industry partners
◦ Information updates from major donors and international organisations.
◦ Laboratory accreditation in Africa: progress of the SLIPTA and SLMTA accreditation programmes; first-person accounts from starred laboratories; perspectives of laboratory auditors
◦ Advice on operating a well-run laboratory: biohazard exposure, safety, specimen collection, proficiency testing.
◦ Workforce development

For more information on attending, sponsoring or presenting at an ASLM2012 satellite session, please visit: http://aslm2012.org/satellite-meetings

We look forward to seeing you in Cape Town!

Glen Fine, MS, MBA, CAE (CLSI)  
ASLM Satellite Meetings Chair
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On 22 July, I had the honour of speaking at a satellite symposium of the International AIDS Conference, AIDS 2012, in Washington, DC, USA. The International AIDS Society hosted the conference in the US for the first time in decades, following the country’s decision to end immigration restrictions on people living with HIV. In keeping with ASLM’s mission and objectives, my presentation called attention to the importance of laboratory capacity-building and workforce development in Africa, without which many public health challenges could not be addressed.

As well as providing an opportunity to highlight the importance of African laboratory medicine, participating in AIDS 2012 allowed me to evaluate recent scientific developments, network with other health professionals, and gather ideas and insights for ASLM’s own international conference, ASLM2012, themed, “Accurate Laboratory Diagnostics – A Pillar of Quality Healthcare”. I was impressed by the energising influence the conference seemed to have on attendees, helping individuals to refocus their energy on the road ahead in the global fight against HIV/AIDS. I hope that ASLM2012 will have the same kind of influence, inspiring people to take advantage of new opportunities as well as to address the challenges associated with the development and delivery of quality laboratory diagnostics.

In addition to planning for our first annual meeting, we at ASLM continue to make major gains in advocating for African laboratory scientists, having recently launched the Society’s first national branch in Gaborone, Botswana. Reaffirming ASLM’s desire to continue collaborating with the American Society for Microbiology (ASM), I participated in ASM’s International Board Meeting in San Francisco, California, on 15 June. ASLM staff also participated at a World Health Organisation (WHO) Technical Working Group meeting in Geneva, Switzerland in June, collaborating with other attendees to aid the development of a new online procurement and supply chain management tool for HIV-related tests. You can read more about these and other activities in the Member News and Standards and Accreditation sections of this newsletter.

Continuing the theme of HIV, our Feature article explores the life, career and perspectives of Dr. Robert Gallo, whose pioneering work includes the discovery of interleukin-2 and the first virus implicated in cancer, co-discovery of HIV, and development of the first HIV test that would save countless lives across the globe. The article, entitled, “An Interview with Dr. Robert Gallo, Pioneering Virologist and Co-Discoverer of HIV”, can be found on page 9.

I hope you enjoy issue 4 of Lab Culture. Thank you for reading, and I look forward to seeing you at ASLM2012.

Dr. Tsehaynesh Messele, CEO, ASLM
TEN MINUTES WITH DR. ALASH’LE ABIMIKU

Alash’le Abimiku, PhD, a virologist with 21 years of experience researching HIV, is a member of the ASLM Board of Directors and a plenary speaker for ASLM’s first international conference (ASLM2012). Dr. Abimiku is an Associate Professor at the Institute of Human Virology (IHV) of the University of Maryland School of Medicine, Division of Epidemiology and Prevention. She is also the Director of the Office of Laboratory Diagnostics and Research of IHV-Nigeria (IHVN). IHV, located in Baltimore, Maryland, USA, is an institute focusing on chronic viral diseases, particularly HIV/AIDS.

**MEMBER NEWS**

Your background is in HIV research. How have the fields of HIV research and public health changed over the years?

Right now, things are very tight in terms of funding. US Government projects like PEPFAR [the US President’s Emergency Plan for AIDS Relief] are working to transition the leadership of caring for HIV infected individuals from international development organisations to local governments and indigenous organisations. The purpose of this change in approach is to create programmes that can be led and sustained by the countries themselves. US universities and non-governmental organisations are expected to remain involved in capacity-building and technical assistance but with a much reduced role. So now, we [IHV] will play more of a supportive role. This shift to local ownership is a good thing, but it needs to be rolled out over a significant period of time to allow for the appropriate oversight to be put in place. Programme monitoring and evaluation is a critical piece to ensure the best possible use of funds and best care for patients.

How have these recent changes influenced laboratory capacity?

IHVN now has well-trained laboratory staff to continue supporting sites that provide HIV treatment, care and prevention, but we need to continue building capacity over several years, and form networks and partnerships to strengthen these programmes. ASLM is taking a clear leadership role in building laboratory capacity and maintaining partnerships; this is very important.

What do you think ASLM’s role will be in bringing together relevant parties through a coordinated approach?

I think that if one goes in and improves situations technically and practically, no one will argue with that. ASLM will make an impact...it is beginning to chip away at the problems that prevent African countries from moving forward with this practical approach to laboratory capacity building. For example, let’s look at the WHO/AFRO [World Health Organisation/African Regional Office] stepwise accreditation process. WHO/AFRO has created an excellent programme, but they can’t do everything by themselves.

“[ASLM] is beginning to chip away at the problems that prevent countries from moving forward with a practical approach to building laboratory capacity”

This is where ASLM can step in, roll up their sleeves, get on the ground and help countries make WHO/AFRO accreditation goals a reality. WHO/AFRO has developed policy, and I see ASLM coming in and making it happen. This is what we need on the continent. ASLM has been in office for only one year, and there are already three new 5-starred labs with great support from CDC-Nigeria, the government of Nigeria’s accrediting body and the indigenous implementing partners such as IHVN. This kind of coordinated approach by ASLM will lead to greater success in Africa. The journal [African Journal of Laboratory Medicine] is important too, as it supports the mentoring of young people, helping them to be successful in grant-writing and in publishing their scientific findings.

What is your role in ASLM2012, the Society’s first international conference?

I’ve been working with some of the conference planning committees. I’m in the Scientific Committee, which plans the content of the meeting and also ensures that scientific leaders attend the conference. My main role is to bring in delegates and speakers.

(continued on page 5)
ASLM CEO TAKES THE STAGE AT AIDS 2012

On 22 July, ASLM CEO Dr. Tsehaynesh Messele presented at a symposium at AIDS 2012, the world’s largest conference on HIV. The American Society for Clinical Pathology (ASCP) hosted the symposium on day one of the six-day conference, which took place from 22-27 July at the Walter E. Washington Convention Centre in Washington, DC, USA.

Also speaking at the ASCP symposium were Dr. Charles Massambu, Director of Laboratory Services for the Ministry of Health of the United Republic of Tanzania, and Ian Lemieux, an ASCP member who has worked extensively with ASCP Global Outreach to improve laboratory tests around the world.

At the symposium, themed, “ART and Science: ASCP at the Centre of the Laboratory Capacity Building in Resource-Limited Countries”, Dr. Messele spoke about the challenges of African laboratory workforce development and objectives for building laboratory capacity in Africa. She began the presentation by identifying constraints to African laboratories, citing poor infrastructure and low recognition as major hurdles. Lack of laboratory workforce development, she said, is a critical problem that contributes to a weak national laboratory system. She also spoke about the strategic objectives of the national laboratory master plan of the Ethiopian Health and Nutrition Research Institute (EHNRI), of which she is the former Director General. These objectives include describing specific plans for developing and implementing national laboratory services as well as expanding standardised training programmes for laboratory staff.

A strong laboratory system is fundamental to diagnosing HIV, monitoring antiretroviral therapy (ART) and evaluating patient response to therapy. The prevention, control and treatment of HIV/AIDS globally are contingent upon the development and support of reliable clinical and public health laboratory networks. ASLM continues to promote quality laboratory services in Africa by supporting the development and implementation of laboratory plans, providing training workshops, fostering research and communication, and advocating for medical laboratories across Africa.
**ASLM BOARD SECRETARY PRESENTS AT ASM2012**

Dr. Fausta Mosha, Secretary of the ASLM Board of Directors, spoke before a special interest symposium at the 112th general meeting of the American Society for Microbiology (ASM) on 17 June in San Francisco, California, USA.

At the symposium, Dr. Mosha presented before the African Initiative Group, which consists of ASM members of African origin as well as members with a vested interest in Africa. Her presentation, “Advancing the Laboratory Profession and Networks in Africa: Achievements through ASLM”, covered the history, mission, achievements and future plans of ASLM. In her address, Dr. Mosha highlighted ASLM’s recent successes, such as the development of grant and scientific writing workshops, collaboration with the World Health Organisation (WHO) to implement the stepwise laboratory accreditation process in Africa, and the promotion of communication and networks through the ASLM newsletter, the African Journal of Laboratory Medicine (AJLM) and the ASLM.org website.

At the end of her presentation, Dr. Mosha identified ASLM’s outstanding needs, including the need for abstract and manuscript reviewers, national ambassadors and support for the ASLM international conference (ASLM2012). Members of the African Initiative Group expressed an enthusiastic willingness to support ASLM, and several symposium attendees signed up to attend ASLM2012 as well as to review abstracts and manuscripts.

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**DR. ALASH’LE ABIMIKU**

(continued from page 3)

**You will speak at a plenary session at ASLM2012. What will be the subject of your presentation?**

My talk will have a very positive message, which is that the Africa of today is not the same as it was ten years ago. Funding from PEPFAR, from the Global Fund, and from others has really changed the face of the continent to a point where African investigators and African staff do not accept low-quality [laboratory] work. It’s a beautiful thing to see. Laboratory professionals across Africa are now realising they have the chance to compete with and attain the same quality standards as laboratories in developed countries. Furthermore, accreditation is no longer the monster that everyone runs away from.

“Accreditation is no longer the monster that everyone runs away from”

**Interviewer: Paula Fernandes, MBA, PhD (Editorial Team); Editor: Rachel Crane (Editorial Team)**

By: Rachel Crane (Editorial Team); Contributor: Fausta Mosha, MD (ASLM)
ASLM PUBLICISES AGENDA AT 13TH WORLD CONGRESS ON PUBLIC HEALTH

ASLM leaders attended the 13th World Congress on Public Health from 23-27 April in Addis Ababa, Ethiopia. The Congress, based around the theme, “Towards Global Health Equity: Opportunities and Threats”, convened public health leaders and professionals from 168 countries and offered more than 100 sessions addressing a multiplicity of public health issues.

With the deadline for the United Nations’ Millennial Development Goals fast approaching in 2015, the topic of global health equity was particularly poignant, and the subject of Africa’s public health challenges within the scope of global health care was a focal point of discussion. The host, the Ethiopian Public Health Association (EPHA), was well equipped to speak to the Congress’s theme, representing a nation that has made enormous strides in providing basic health care to its most vulnerable citizens even in the face of exceptional challenges.

At the formal request of the Ethiopian Ministry of Health, ASLM was one of more than 30 organisations to share information, visions for the future of public health, and specific strategies to improve public access to essential health care across Africa and around the world. ASLM’s mission of promoting better laboratory systems and diagnostic tools in vulnerable areas is essential for achieving global health equity, and Society representatives were delighted at the opportunity to publicise their agenda to a receptive audience of passionate health professionals.

At ASLM’s booth, visitors learned about strategies for working with local and international organisations and ministries of health in each African country; pressing issues and important developments in African laboratory science; and the many achievements of the Society in the period since its establishment. Over 2,500 participants visited the ASLM exhibition booth with many deciding to become members.

As 2015 draws near, ASLM is hopeful that its advocacy for laboratory science will help local, national and international health organisations fulfil the UN’s Millennial Development Goals, and that the next triennial World Congress on Public Health in 2015 will be able to report great accomplishments in providing health services to all citizens of the world.

By: Aaron Krol (Editorial Team); Editor: Jessica Fried, MPH (Editorial Team); Contributor: Teferi Mekonen, MSc, MPH (ASLM)
Each year, over four million people die of HIV/AIDS, malaria and tuberculosis (TB), due in part to a lack of accessible diagnostic tests and treatments. In the low- and middle-income countries most affected by these diseases, much-needed medications and diagnostics are often either too costly or non-existent. As private sector companies refrain from investing in healthcare markets they deem unprofitable, innovations in treatments for diseases of public health significance stall, and lack of market competition keeps treatment and diagnostic prices high.

Through funding from an airline ticket tax programme, UNITAID is collaborating with countries to address some of the world’s greatest public health challenges by improving access to high-quality medicines and diagnostics for HIV, TB and malaria and affecting market dynamics to reduce costs. The tax ranges from US $1 for economy-class passengers to US $40 for first-class and business travel, and is simply added to a participating country’s existing airport tax following the adoption of a country-wide law or decree. This source of funding helps UNITAID improve access to diagnostics and treatments through a market-based approach, creating incentives for companies to provide effective healthcare products at a lower price as well as to innovate new products. Since the launch of the programme in 2006, nine countries have approved the tax, including six African countries (Cameroon, Chile, Congo, France, Madagascar, Mali, Mauritius, Niger, and the Republic of Korea). Adoption of the “painless” programme (a 2011 assessment of the levy showed it had no adverse impact on air traffic) has given African countries the opportunity to fund public health improvement efforts affecting their own populations.

With little financial incentive for companies to invest in paediatric HIV antiretroviral treatments (ARTs), the global market for children’s HIV treatments and diagnostics has been sorely lacking, resulting in high mortality rates among children born HIV-positive. In 2006, UNITAID began investing in paediatric HIV medications and diagnostics in Asia, Africa, and the Caribbean, and, with the help of the Clinton Health Access Initiative (CHAI), has negotiated with providers to reduce product prices through coordinated procurement. From 2006-2011, the price of children’s HIV treatments dropped by 80%; in 2011 alone, 86,000 PCR (polymerase chain reaction) tests were provided for infants born to HIV-positive mothers in the first quarter of 2011.

In countries where malaria is widespread, 3 out of 5 patients access medications through private sector compa-

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2. Ibid.
3. Ibid.
4. Ibid.
8. Ibid., p. 26
9. Ibid., p. 26
10. Ibid., p. 26, p. 53
industries; many self-treat with over-the-counter medications. Consumers tend to purchase older, less effective antimalarial drugs due to their affordability, but such treatments often fail to protect against drug-resistant malaria. The Affordable Medicines Facility—malaria (AMFm) pilot project, founded in 2010 and largely funded by UNITAID, strives to create a market in which the customer can buy artemisinin-based combination therapies (ACTs, the most effective malaria treatments available) at a lower price. To achieve this, the AMFm project negotiates with companies to decrease the cost of ACTs, and subsidises part of the reduced price to producers so that drug importers only have to pay for the remainder of the cost. Within a year following the launch of the programme, the market for ACTs doubled, and consumers were paying USD$0.33-USD$1.32 per treatment rather than the USD$8-USD$10 they were paying in 2010.

Many TB diagnostics and treatments are inadequate and out-of-date; global markets for TB-related products remain idle, innovation stalled by a lack of financial incentives. Moreover, second-line therapy for multi-drug resistant tuberculosis (MDR-TB) is costly—much more so than first-line therapy—and stock-outs are often an issue due to the low production level of medicines. To address these issues, UNITAID has created the Strategic Rotating Stockpile (SRS) programme, which provides rush orders of emergency MDR-TB treatments and facilitates the more effective production of medications to help strengthen demand. EXPANDx TB, another UNITAID programme, helps increase access to new TB diagnostic technologies in countries most affected by the disease.

In 2012, UNITAID authorised four new projects that will strive to advance diagnostics and monitoring technologies for HIV and malaria. These technologies will improve access to diagnostic tests and medications in isolated areas, in addition to facilitating disease surveillance. Two of the new programmes will promote HIV diagnosis in young children and the monitoring of treatment in places that have previously lacked access to diagnostic services; the two other projects will promote access to reliable malaria rapid diagnostic tests in resource-limited settings.

Today, UNITAID operates mainly through funding from its air ticket levy, with additional support provided by 29 countries as well as the Bill and Melinda Gates Foundation. In just a few short years, UNITAID has succeeded in addressing some of the world's public health gaps through innovative financing and strategic market intervention. Through its new and on-going projects, UNITAID continues to address challenges related to the innovation and delivery of affordable diagnostics and treatments for HIV/AIDS, malaria and TB in the developing world.

By: Rachel Crane (Editorial Team)
“I’ve sometimes been asked, did I suspect [the AIDS epidemic] would be big? Absolutely, because we had serum from all over the world...we knew that it was going to be huge, but did we know it would be that large in Africa? No.”

Although he has visited the continent, and collaborates closely with scientists in Nigeria, Dr. Robert Gallo is reticent about the impact of his own research on HIV/AIDS in Africa. He describes the development of a blood test for HIV as the most practical achievement of his career, and indeed, it has impacted millions: by preventing transmission through blood transfusions; by detecting patients’ infections years before symptoms begin to manifest; and, through patent licensing proceeds, by establishing a fund for treatment and scientific training in developing countries. Before the antibody-based test was developed and commercialised, the state-of-the-art technique for identifying blood that might carry HIV was FACS analysis of the ratio of CD4 to CD8 T cells—a costly and time-consuming process impractical for routine tests and inaccessible to laboratories with limited resources.

Gallo lost his sister at a young age to leukaemia. He went to medical school to become a paediatric oncologist, but his experience in the clinic as a young doctor was deeply disheartening; he recalls “meeting a mother every two weeks to tell her her kid [was] dead. It was just awful.” A colleague’s suicide within his first six months of residency cemented his decision to move out of the clinic and into the laboratory. In his book Virus Hunting, Dr. Gallo explains, “there are no patients in a research laboratory, no pain, no suffering, no disease, no death...the questions are scientific—not moral, not political, not even humanistic.”

Although he found the suffering associated with leukaemia too grim to work with, the young Dr. Gallo remained interested in the science of cancer. He started a laboratory at America’s National Cancer Institute researching leukaemia. His first focus was on identifying
retroviruses, also called RNA tumour viruses. Although retroviruses had been identified in animals, it was widely believed that they were not able to infect humans; Dr. Gallo recalls that other scientists mocked him as “the guy with the rumour virus.” His laboratory’s isolation of the first human T cell leukaemia virus, HTLV-I, and conclusive demonstration that the virus caused leukaemia, was a triumph. Dr. Gallo still says that in his career, “the most gutsy…and original [achievement] was proving human retroviruses existed.” He remained focused on T cells, and remarks even today that “I can give a talk that way—Theme of Career: T cells.” He has participated in the discovery of five new viruses, and was instrumental in early efforts to culture T cells, discovering the growth factor interleukin-2.

His laboratory’s expertise in growing T cells and isolating retroviruses proved invaluable in taking on the puzzle of the AIDS epidemic. Dr. Gallo began to investigate AIDS in early 1982, after he heard Dr. James Curran, of the US Centers for Disease Control and Prevention, describing the spread of the syndrome and calling for virologists to become involved. He recalls thinking, “it’s a T cell disease; we’re a T cell lab. We know how to grow them better than anybody else.” Did he believe he would be the scientist to find the cause? Characteristically confident, Dr. Gallo replies, “I wouldn’t have gotten involved if I didn’t think I could solve it.”

Even as early as 1982, Dr. Gallo had a hunch that AIDS would be caused by a retrovirus, perhaps an envelope variant of the HTLVs his laboratory had identified. “I’m not a rigorous scientist…somebody told me that if I have a strength, it’s intuition. And I’ve always thought that was true.” When Gallo first published on isolation of the virus and its connection to AIDS, he dubbed it HTLV-III—a decision that would prove hasty. “The irony is, Mother Nature, as Einstein said, is not cruel, but never so simple. [HIV] turned out not to be a brother, not even a cousin [of the HTLVs].”

As the epidemic spread, death once again shadowed his biomedical research. “People that I knew well died of HIV, and with [HIV-associated] cancer...it was horrifyingly bad, so much so that it was even difficult to look at patients.”

The 1980s were also a time of academic and political controversy in HIV/AIDS research. Dr. Gallo’s research group at the National Institutes of Health (NIH) in Washington, DC competed with a French group, led by Dr. Luc Montagnier, at the Institut Pasteur. According to Dr. Victoria Harden, former director of the NIH Historical Office, “Chronologically, the French isolated their virus...in 1983, but they did not demonstrate conclusively that there was a causal link between their virus and AIDS. [Dr. Gallo] waited until May 1984, and then published four papers in Science to do this”3. Amid questions of who deserved greater credit for the discovery, relations were tense. They became tenser when both research groups applied for a US patent for the antibody-based blood test for the virus; a lawsuit ensued, and French and American heads of state became involved4. In 1987, the two groups came to an agreement to recognise one another as co-discoverers of the virus; Drs. Gallo and Montagnier published a timeline in Nature outlining the contributions of both groups5. The two have continued to collaborate as leaders in the field of HIV research6.

But the Nobel Committee still surprised many in 2008 when it recognised Dr. Montagnier and Dr. Francoise Barre-Sinoussi, first author on the 1983 isolation paper, but not Dr. Gallo. In 2008, he told Science magazine, “I’m a little down about it, but not terribly…the only thing I worry about is that it may give people the notion that I might have done something wrong”7. Dr. Gallo’s strongly-held belief that “when you let the humanistic side in [to science], it backfires” makes some sense given the amount of controversy he has faced over his career: from the scientists who teased his “rumour virus” to more serious concerns, including an investigation by the NIH’s Office of

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1Dr. Elizabeth Harden. Interview 4 November 1994. History.NIH.gov/NIHInOwnWords

10 August 2012 ASLM Newsletter
Dr. Abimiku says to him, “In Nigeria, one of the questions they’ve asked me... is where in your upbringing did you get this incredible ability to hear past an individual? It’s not whether it’s an African that’s speaking to you, or Chinese, or so on, sometimes with really very difficult accents; you’re able to get to the science, and you discuss it like you would with [NIAID director Dr. Anthony] Fauci. You probably don’t notice it, but it’s an incredible capacity that you have.” It is difficult to get an answer from him; for a man who has spent his career doing deeply translational research, he draws a surprisingly sharp line between what he calls the “humanistic” side of life and the scientific world. Dr. Gallo’s scientific side seems absolutely detached from people.

Dr. Abimiku arrived in Dr. Gallo’s laboratory in 1991 as a postdoctoral fellow, having completed university in Nigeria and a doctorate in medical microbiology in England. Her project, funded by an Italian initiative to foster international scientific collaboration, was to characterise the HIV epidemic in Nigeria; she found herself also helping to build a scientific community there. Dr. Abimiku reflects that “the Institute [of Human Virology]’s first entrance into Africa was because [Dr. Gallo] allowed me as a postdoc to go and characterise the viruses in Nigeria. That was really the first involvement of Africans as scientists” in global study of HIV.

The international collaboration proved long-lived; Dr. Abimiku has worked closely with Dr. Gallo ever since. After Dr. Gallo left the National Cancer Institute to become director of the Institute for Human Virology (IHV) at the University of Maryland School of Medicine, he, Dr. William Blattner, and Dr. Abimiku helped found a parallel Institute of Human Virology-Nigeria in 2004, using funds from the President’s Emergency Plan for AIDS Relief (PEPFAR). Like its sister institution in Baltimore, IHV-Nigeria conducts epidemiological and clinical studies of HIV and trains doctors and laboratory scientists. IHV treats more than 750,000 HIV positive patients in seven African and two Caribbean countries and over 5,000 Baltimoreans.

Today, one research goal of the Institute for Human Virology in Baltimore is to develop a vaccine for HIV. Dr. Gallo says that “the hope, the real hope for me,” is to see this goal accomplished before his death—the ability to take his deadliest research subject with him when he goes. But speaking more practically, he says, “I do think that we will see a vaccine in the lifetime of somebody here, but I’d bet against mine.” Absent that legacy, how would he like to be remembered? “Truthfully. With the truth, not with stories that I created the virus or did this or that...We were lucky to come along at a certain time with a certain technology that enabled a certain outcome. That’s about it.”

By: Laurel Oldach (Editorial Team); Interviewers: Paula Fernandes, MBA, PhD (Editorial Team) and Rachel Crane (Editorial Team)

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The Global Virus Network: continuing roles in global public health and virology

Dr. Gallo is a co-founder of the Global Virus Network, an “independent panel of virology experts” launched last March by about thirty world-renowned virologists. Echoing his characteristic distrust of organisations motivated by anything but science, Dr. Gallo says, “GVN is not first responders. It’s there when needed; it’s there to consult privately; it’s free of the heaviness of a nation.” So far it has worked to identify the foremost threats to the world from viruses; its mission statement looks forward to a future of collaborative research and education of the public.
One of ASLM’s major commitments in strengthening laboratory systems across sub-Saharan Africa is to support the World Health Organisation African Regional Office (WHO/AFRO) Laboratory Accreditation System, a joint venture by the US Centers for Disease Control and Prevention (CDC) and World Health Organisation (WHO) to help laboratories in Africa meet the highest standards of reliability and gain international accreditation. Accreditation is a profound step forward for a laboratory, ensuring that professionals have the best training and proficiency with the latest diagnostics, and attracting donors and staff. On 25-26 June, ASLM celebrated a major triumph for this programme at a symposium in Gaborone, Botswana, where four public health medical laboratories received their international accreditation. To support and build on this substantial progress, ASLM also announced the launch of its first national branch, ASLM-Botswana, alongside the newly-founded Botswana Institute for Clinical Laboratory Professionals (BICLP).

The first of the four public laboratories in Botswana to gain accreditation was Bamalete Lutheran Hospital Laboratory, a small institution in the town of Ramotswa. This achievement shows that the WHO/AFRO programme is able to inspire significant improvements even in smaller laboratories outside the main urban centres. Three more public laboratories and several private institutions in Botswana have now achieved accreditation, and another five are enrolled in the system.

The two-day symposium in the capital was hosted by the Botswana Ministry of Health, and opened with keynote speeches from its Assistant Minister of Health Mr. Gaotlahtse Matlhabaphiri, and US Ambassador Michelle

“High quality laboratory services are not just the gateway to treatment and management of priority diseases, but are essential for public health surveillance and policy decision making”

(continued on page 13)
ASLM SUPPORTS THE WHO’S AIDS MEDICINES AND DIAGNOSTICS SERVICE

Health organisations are becoming increasingly aware of the importance of efficient diagnostic services. This has been demonstrated clearly by the World Health Organisation (WHO) and associated groups that have placed new emphasis on keeping laboratories properly stocked. In September 2011, the WHO’s AIDS Medicines and Diagnostics Service (AMDS) held its third Technical Working Group meeting explicitly devoted to the procurement and supply chain management of laboratory commodities essential for HIV care and treatment.

The major goals of the meeting were to share experiences in laboratory harmonisation and assess a number of tools currently under development as part of the WHO’s online Procurement and Supply Management (PSM) toolbox, available at http://psmtoolbox.org/en/. PSM tools are designed to help laboratory and clinic personnel track their use of HIV diagnostics and medicines and prevent stock-outs. WHO AMDS has invited major laboratory partners, including ASLM, to participate in developing new tools, lending their expertise in laboratory medicine across all levels of the laboratory network. From 20-21 June, ASLM participated in an AMDS Technical Working Group meeting in Geneva, Switzerland, sharing ideas and critiques of a new tool. New WHO tools are expected to be ready for field testing in September 2012, and ASLM will be an active partner in identifying laboratories to test and collect site level feedback.

AMDS is grateful for ASLM’s work and insight during and leading up to the Technical Working Group meeting. As a result of this productive collaboration, AMDS has invited ASLM to be a partner in their PSM effort, serving on the Technical Working Group. ASLM will regularly attend all future technical working group meetings to share experience and expertise in the field of laboratory medicine, working to create efficient laboratory systems to identify and treat HIV/AIDS.

By: Aaron Krol (Editorial Team); Editor: Jessica Fried, MPH (Editorial Team); Contributor: Teferi Mekonen, MSc, MPH (ASLM)

ASLM-BOTSWANA BECOMES FIRST LOCAL BRANCH

Gavin. In comments before the symposium, Gavin acknowledged the new emphasis on reliable laboratory services, saying, “I am pleased that the US government and the Ministry of Health recognise that high quality laboratory services are not just the gateway to treatment and management of priority diseases, but are essential for public health surveillance and policy decision making.” The US government provided financial and technical support for the meeting through PEPFAR and the CDC.

The symposium, which included a number of seminars, presentations and panel discussions with ASLM members, focused on many of ASLM’s highest priorities, including national and international information sharing; laboratory best practices; communication between clinicians and laboratory staff; and collaboration with international health organisations, as well as the importance of accreditation and strategies for achieving it. Ralph Timperi, an ASLM Board member and a Senior Advisor of Laboratory Practice & Management at the Association of Public Health Laboratories (APHL), also introduced ASLM’s background and history. Other presenters included BICLP, Botswana Health Professions Council (BHPC), Botswana Bureau of Standards (BOBS), APHL, American Society for Clinical Pathologists (ASCP), American Society for Microbiology (ASM), and Southern African Development Community Accreditation Service (SADCAS).

ASLM-Botswana, the first ASLM branch to operate on a local level, will set the mold for future branches that can guide laboratory network development, help draft national laboratory policies and guidelines, and provide local support in the accreditation process, while building strong relationships and an intimate understanding of the region’s unique needs and challenges.

By: Aaron Krol (Editorial Team); Editor: Jessica Fried, MPH (Editorial Team); Contributors: Ebi Bile (CDC-Botswana) and Katy Yao, PhD (CDC-Atlanta)
As a trained laboratory professional and medical doctor, Dr. Cara Kosack is a rare breed in the laboratory medicine profession. She talked to us about her experiences in worlds of laboratory science and medicine, the crossover between the two and how she rose to the challenge of ensuring the laboratory supply chain for Doctors Without Borders / Médecins Sans Frontières (MSF).

Please describe your education and professional background. What is your role within MSF?

I studied laboratory science for three years at the University Hospital Aachen in Germany, where I learned basic techniques in microbiology, histology, clinical chemistry, haematology and blood banking. Following this, I earned my Medical Degree from the University of Hamburg, Germany, and, in 2009, I completed my Masters in Epidemiology at the LSHTM [London School of Hygiene and Tropical Medicine].

After five field missions with MSF in clinical efficacy trials, serving in management positions as a medical doctor and also as a laboratory scientist, I took on the role of coordinator of the laboratory and diagnostic imaging groups at the MSF headquarters in Amsterdam. We decide on which diagnostic tools to use in the field as well as prepare internal guidelines and policies. We also carry out operational research on diagnostic tools if information on their accuracy is insufficient.

Can you tell us about the field missions you have done with MSF? What were some of the challenges of working in the field?

My first field mission was in Uganda in 2002. I coordinated an antimalarial in vivo efficacy study for children under five years. Coordination of the study entailed both clinical and laboratory management, as we diagnosed children with malaria in the laboratory and then had them come in for treatment. We would then recollect blood samples and send them back to the lab for analysis.

While in Uganda, I also set up a routine laboratory in a health centre. The main frustration was waiting for equipment to arrive. This is where ASLM can be very useful; it can define and enforce standards for education and training as well as laboratory services, and ensure that the network of services is coordinated and functioning efficiently.

I enjoyed working in the outpatient clinic and in the laboratory in Uganda where I was able to see children in person and assess clinical presentations as well as analyse their blood specimens in the laboratory. This was very interesting because you don’t usually have a face to connect to the specimen. During this mission, I could track the development of each patient and monitor changes.

After Uganda, I went to Sierra Leone in 2003 to finish another malaria study. The previous team didn’t agree with giving Chloroquine to children, as drug-resistance was high and children relapsed early. It was important to document numbers of relapses to advocate for treatment changes.

After the study, I went to Makeni and managed the medical supply chain for a hospital.

I then went to Ethiopia for a field mission in HIV RDT accuracy. The professionals I worked with were very good. We noticed a number of cross-reactivity issues and potential false positives. We had to react quickly to get to the bottom of the problem and discovered that most were co-infected with Leishmania. By instituting testing for Leishmaniasis...
and establishing confirmatory tests on every co-infected patient, we significantly reduced the number of false diagnoses. The Leishmaniasis experience really did underscore the importance of operational research in delivering quality care.

My fourth mission was in Pakistan in 2006, following the earthquake. I served as a Flying Laboratory Technician, setting up hospitals and clinical laboratories in Kashmir and on the border of Afghanistan. I trained national staff not only in laboratory techniques, but also in supply management and quality control. It is difficult to import medical supplies into Pakistan, so we had to evaluate local suppliers for antiretrovirals for HIV.

My last longer term mission was in Zimbabwe, where I was in charge of the medical coordination of one of MSF’s largest HIV programmes. However, at the same time we faced a huge cholera outbreak and a malnutrition crisis, so we had to respond to that as well.

In field missions, did you more often play the role of laboratory scientist or the role of clinician?

MSF uses me a lot in areas where both backgrounds are useful, so sometimes I put on my laboratory hat and sometimes I put on my clinical hat. I’m also an epidemiologist, so sometimes I wear that hat, as well. I provide what is needed at the moment, which is sometimes both clinical and laboratory experience. I really enjoy being involved with the patient’s recovery as well as the diagnosis, discovering what is wrong.

As a clinician with a passion for laboratory science, are you a unique resource for MSF? Or are there many clinicians with a similar background?

I am indeed the only one in MSF with this dual background. As you can imagine, it comes in handy in many situations. In particular, it helps in the establishment of diagnostic algorithms. It helps me determine at what point in the diagnostic process a certain test or tool will help to establish a diagnosis and when it is most cost-effective to use it.

Are more people with a dual clinical-laboratory background needed?

Yes, it is good to have people who are able to work in both settings; however, physicians who generally understand laboratory work and the difficulty of accuracy can be very helpful, too. I often work to bridge the gap, striving to promote constructive communication between the lab and the clinic.

What has your experience been in Africa working at the laboratory-clinical interface, and what are people’s feelings toward the laboratory? Do people have unrealistic expectations of the laboratory?

That is a hard question. There is both distrust of the lab and disbelief in the laboratory tests. Patients come to the laboratory to give samples, but it is unclear whether they believe the diagnosis coming out of the laboratory; a lot of doctors want a black-and-white response from the lab, but often the laboratory cannot give such a simple answer. People don’t trust laboratories due to the issue of quality, but at the same time people seem to understand its importance.

Are there programmes in place at MSF to help clinicians better understand the laboratory? Are laboratory scientists at MSF encouraged to undertake training to better understand clinical practice?

When MSF conducts training courses on specific diseases, such as HIV, or on epidemic response, the courses include sessions on the laboratory and sample collection. I think it is very crucial for clinicians to come to the laboratory and see how it operates. Furthermore, if illogical results are found, we encourage laboratory staff to contact the clinician to discuss the case. These collaborative exchanges are essential for understanding each other’s work and for promoting seamless patient care at a hospital or clinic.

How does MSF manage projects in resource-limited countries where laboratory staff are not available? Are there situations in which clinicians have to step in and provide laboratory services?

When no local, well-trained staff can be found, we send out expatriate laboratory staff to help recruit local staff and carry out training in technical areas as well as in laboratory management. In addition, we offer internal courses for and expatriate national staff to help them gain laboratory skills and expertise in laboratory management.
During the course of your career with MSF, how has your perspective on the laboratory-clinical interface evolved? Do you find that clinicians and laboratory scientists have a better understanding of each other’s roles?

Well, I think my area of work has changed a lot, and, consequently, the interaction with clinicians has also changed. Before, I used the tests and diagnostic tools available in the field. Now, my colleagues and I decide which diagnostic tests and tools to procure and send to the field. In making these decisions, clinicians need a much better understanding of diagnostic performances and of the medical device regulations that accompany them. When a test is used in the field, clinicians usually understand the test and its limitations quite well. However, when you have a choice of 20 different tests in front of you and you need to make a choice of which one to purchase, the discussion gets more detailed and more interaction and knowledge is needed to make well-informed choices.

What interests you most about the laboratory? What motivated you to become involved in laboratory science, as a clinician?

As my medical career started in the laboratory; I never stopped being interested in it. My heart is in the laboratory. For me, coming to the right diagnosis is the most fascinating and exciting part of medicine. Treatment is not as magical—the real mysteries are answered in laboratory. We pick our brains most prior to identifying treatment options. The diagnostic market also changes very rapidly. New tools become available, and others obsolete. New inventions can change the diagnostics of a disease quickly. It’s a field that is constantly in flux, always advancing; this keeps my life exciting.

“My heart is in the laboratory. For me, coming to the right diagnosis is the most fascinating and exciting part of medicine”

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