

Regional stakeholders' summit

30 January 2018, 10:00–17:30 Khayelitsha, Cape Town, South Africa How can we work together to stem the tide of antimicrobial resistance?





The inappropriate use of antibiotics and other medicines is fuelling the emergence of antimicrobial resistance (AMR) globally, and is reducing the effectiveness of the few therapeutic options we have left to treat severe bacterial illnesses. Currently, 700,000 deaths annually are due to HIV, malaria and drug-resistant strains of common bacterial infections. In 2016 alone there were almost 500,000 new cases of multidrug resistant tuberculosis reported. Sepsis, a major cause of neonatal deaths worldwide is often caused by resistant bacteria. It is estimated that by 2050, 10 million deaths will be caused by AMR each year, with a loss of over 100 trillion USD in economic output.

South Africa led the fight against HIV/TB and has some of the most advanced laboratories and capacities in Africa. But AMR is stretching everyone to the limit. What can South Africa do to support innovation throughout the continent to ensure everyone is working together in the fight to stop AMR?

Many hard-fought battles have been waged in the HIV and TB space. What lessons learned can be applied to antibiotic resistance so we can rapidly deliver the right diagnostics to the right people to save lives? What innovations will empower doctors and patients to change the way we use antibiotics? How can we ensure that we preserve the efficacy of current and new drugs for as long as possible?

It is time for action. This meeting brings together health workers, researchers, policy makers and patient communities to demonstrate the critical role of diagnosis in the fight against AMR, calling on the community to unlock the potential of diagnostics as a front-line defence against this global threat.

AGENDA

10:00 Opening remarks

Glenda Gray, CEO and President, South African Medical Research Council (SAMRC)

10:10 Welcome and introduction

Sheila D. Tlou, Chair, Global HIV Prevention Coalition; Board of Directors, FIND

10:20 PLENARY 1: Doctors and patients on the frontline: from drug resistant HIV/TB to resistant bacterial infections

Eric Goemaere, Regional HIV/TB Technical Support Coordinator, Médécins Sans Frontières (MSF)

Laura Trivino, Medical Coordinator Khayelitsha, Médécins Sans Frontières (MSF)

10:45 PLENARY 2: Government leadership: AMR is putting future generations at risk – what can governments, pharmaceutical companies and others do to turn the tide?

David Parirenyatwa, Minister of Health, Zimbabwe

11:10 AMR + Africa + World: How bad is it really and how can surveillance inform public health and clinical care?

Jay K. Varma, Senior Advisor, Africa CDC

11:30 Announcement

SAMRC / FIND collaboration announcement

11:40 COFFEE (and press Q&A)

12:00 PANEL DISCUSSION: Is Africa ready and able to fight AMR – and how can it contribute to the global fight?

Andrew Jack (MODERATOR), Editor (FT Health), Financial Times; Board of Directors, FIND Yogan Pillay, Deputy Director-General, National Department of Health, HIV & AIDS, TB and Maternal, Child & Women's Health

Mah-Séré Keita, Director of Global Health Security, African Society for Laboratory Medicine (ASLM)

Amadou Alpha Sall, Administrateur Général, Institut Pasteur de Dakar

Yvon de Jong, Project Officer, ReAct Africa **Chisomo Msefula**, Senior Lecturer, University of Malawi

Rosie Burton, Regional Clinical Mentor, Southern Africa Medical Unit (MSF)

13:00 LUNCH

14:00 ROUNDTABLE: Diagnostic innovation: what do we have today and what do we need tomorrow?

Marc Mendelson (CHAIR), Co-Chair South African Antibiotic Stewardship Programme; President-

Elect of the International Society for Infectious Diseases

Wendy Stevens, Professor and Head, University of the Witwatersrand and the National Health Laboratory Services (NHLS); Principal Investigator, iLEAD (Innovation: Laboratory Engineered Accelerated Diagnostics)

Rosanna Peeling, Professor and Chair of Diagnostics Research, London School of Hygiene and Tropical Medicine (LSHTM); Director, International Diagnostics Centre (IDC)

Martin Matu, Medical Laboratory Specialist, East, Central and Southern Africa Health Community (ECSA-HC)

Husna Ismail, Epidemiologist, National Institute for Communicable Diseases (NICD)

Zibusiso Ndlovu, Laboratory Advisor, Southern Africa Medical Unit (MSF)

15:00 PANEL DISCUSSION: Making it happen: how can diagnostics optimise the use of antibiotics and improve surveillance?

Catharina Boehme (MODERATOR), CEO, FIND Francis Aboagye-Nyame, Program Director, Systems for Improved Access to Pharmaceuticals and Services (SIAPS)

Renuka Gadde, Vice President, Global Health, BD (Becton, Dickinson and Company); Director, Project Hope; Member of the Board, African Society for Laboratory Medicine (ASLM)

Louis Roux, Managing Director, LifeAssay Diagnostics

Simon Travers, Associate Professor, South African National Bioinformatics Institute (SANBI) Robert Sambursky, President, Chief Technology and Medical Officer, RPS Diagnostics

15:45 Comments from the floor Glenda Gray (MODERATOR)

16:00 COFFEE

16:20 ROUNDTABLE: How can we rally support in civil society and across sectors?

Ilona Kickbusch (MODERATOR), Director, Global Health Centre & Adjunct Professor, Graduate Institute of International and Development Studies; Board of Directors, FIND

Farouk Jega, Senior Country Director Nigeria, Pathfinder

Ian Sanne, CEO, Right to Care

Carol Ruffell, Head of South Africa Liaison Office, Global Antibiotic R&D Partnership (GARDP), Drugs for Neglected Diseases initiative (DNDi) Lynette Mabote, Regional Programmes Lead, AIDS & Rights Alliance for Southern Africa (ARASA) Amanda Banda, Regional Advocacy Officer,

Médécins Sans Frontières (MSF)

17:15 Closing address

Richard Gordon, Executive Director, SAMRC

You are invited to visit the diagnostics showcase during coffee and lunch breaks.

Please join us for a short drinks reception after the meeting.

SPEAKERS



FRANCIS "KOFI" ABOAGYE-NYAME

Program Director, Systems for Improved Access to Pharmaceuticals and Services (SIAPS)

Mr. Francis Aboagye-Nyame is the SIAPS Program Director and guides the \$244 million programme's efforts to strengthen pharmaceutical systems by providing strategic vision and programme leadership to more than 350 multi-disciplinary technical teams and managerial staff

Under his leadership, SIAPS has built a dynamic framework and network serving more than 20 countries addressing key areas in the pharmaceutical sector including governance, institutional capacity building, finance strengthening strategies, and improving pharmaceutical services. He collaborates closely with USAID, country governments, and partners on hundreds of pharmaceutical-forward activities.

A thought leader on pharmaceutical management with 23 years of experience including several on pharmaceutical programmes, he has developed specialized experience in health and pharmaceutical systems strengthening. In particular, Mr. Aboagye-Nyame has expertise in supply chain management, quality assurance, pharmaceutical financing, capacity building, leadership and organizational development, regulatory affairs, medicines policy, strategic planning, programme implementation, and monitoring and evaluation. Previously, he held several senior leadership and management positions on SPS, SCMS, and RPM Plus, including Technical Deputy Director and then Program Director of SPS.

Prior to joining MSH, Mr. Aboagye-Nyame spent almost 10 years with the Ghana Ministry of Health, serving first as a Deputy Program Manager of the National Drugs Program that sought to promote rational drug use, strengthen quality assurance of pharmaceuticals and pharmaceutical systems, improve the financing of drugs, and improve systems for procurement, storage, and distribution of drugs, and then as Head of the Procurement Unit overseeing the procurement process and the institutionalization of their procurement management system. Mr. Aboagye-Nyame holds a Bachelor of Pharmacy, an MS in Pharmaceutical Analysis and Quality Control, and an MBA in Finance.

AMADOU ALPHA SALL

Administrateur Général. Institut Pasteur de Dakar

Dr. Amadou A. Sall is a virologist with a PhD in Public Health. He received his scientific education at Universities Paul Sabatier at Toulouse, Paris Orsay and Pierre et Marie Curie in France. He also visited several laboratories for his training including Institut Pasteur in Paris, France; Institute of Virology and Environmental Medicine in Oxford, UK; Center for Tropical Disease at the University of Texas Medical Branch at Galveston, USA; and the Albert Einstein College of Medicine of Yeshiva University, New York, USA. From 2002 to 2004, Dr. Sall worked in Cambodia as Head of the Viral Hepatitis Laboratory at the Institut Pasteur Cambodia. From 2010 to 2011, he worked as a Visiting Research Scientist at the Center for Infection and Immunity at the Mailman School of Public Health at Columbia University, New York, USA, on pathogen discovery.

Dr. Sall is currently Head of the Arboviruses and Viral Haemorrhagic Fever Unit, Director of the WHO Collaborating Center and Scientific Director of the Institut Pasteur de Dakar, Senegal, which belongs to the Institut Pasteur International Network. He has published more than 100 papers and book chapters and has given more than 150 scientific communications at international meetings. Dr Sall is a member of several WHO expert groups, including the Global Outbreak and Alert Response Network and the Strategic Advisory Group of Experts on Immunization. He has also worked as a consultant for the World Organisation for Animal Health.



AMANDA BANDA

Regional Advocacy Officer, Médécins Sans Frontières (MSF)

Ms. Amanda Banda is the HIV Advocacy Coordinator for MSF Brussels Operational Centre, in charge of the African region, and based in Johannesburg, South Africa.

For the past 8 years she has been working on the front lines, engaging with civil organizations, ministries of health and finance as well as donors and other programme implementers in and outside of the region, bringing MSF's field realities and influencing decisions on a number of health systems dossiers.

She has wide experience working and strengthening communities and civil society organisations, particularly in the Africa region on community systems and models of care, patient-focused responses, demand creation and engaging civil society to hold donors and governments to account – as well as challenging donors to

keep communities at the centre for a sustainable response. Ms. Banda has set up civil society advocacy platforms and spaces to coordinate civil society organisations in their watchdog role, and worked with them to win tangible results from governments and donors on a number of health systems issues.

CATHARINA BOEHME CEO. FIND

Dr. Catharina Boehme leads FIND, an international non-profit organization based in Geneva, Switzerland that enables the development and delivery of much-needed diagnostic tests for diseases of poverty, including tuberculosis, malaria, hepatitis C, HIV, sleeping sickness and other neglected tropical diseases.

Under her leadership, Dr. Boehme reshaped the organization to provide an open clinical trial platform, strengthening its technical support programme, and reinforcing its strategic partnership with WHO, other UN organizations and national disease control programmes. This led to the appointment of FIND as a WHO Collaborating Centre, acknowledging the role FIND plays in evaluating and introducing new diagnostic solutions and building laboratory capacity needed to effectively control TB.



Dr. Boehme holds a Doctor of Medicine in Internal Medicine from Ludwig Maximilians University in Munich, Germany, as well as diplomas in Public Health and in Management & Leadership. Prior to joining FIND in 2005 with a focus on clinical trials and laboratory strengthening, she worked as programme coordinator for the Department of Infectious and Tropical Diseases in Munich and established a TB research unit at Mbeya Medical Research Program in Tanzania.

ROSIE BURTON

Regional Clinical Mentor, Southern Africa Medical Unit (MSF)

Dr. Rosie Burton is a South African-trained physician and specialist in infectious diseases. Until recently, she worked as a specialist in Cape Town, in hospitals serving a population with a high prevalence of HIV and TB. She has extensive experience in clinical management of cryptococcal meningitis and other opportunistic infections.

Dr. Burton currently works for the MSF Southern African Medical Unit, as a clinical mentor in HIV/TB. She works within hospital based HIV programmes in low-resource countries in sub-Saharan Africa, focusing on improving the clinical management of patients with advanced HIV, and reducing mortality. In all of the settings where she works, presentation with advanced HIV is overwhelmingly amongst patients who are ART-experienced.



RENUKA GADDE

Vice President, Global Health, BD (Becton, Dickinson and Company); Director, Project Hope; Member of the Board, African Society for Laboratory Medicine (ASLM)

Ms. Renuka Gadde has worked at BD, a medical devices and diagnostics company, for 14 years. She works with international agencies, thought leaders and governments to strengthen medical and clinical practices around the world. Her current focus is to establish appropriate policies and standards for safe blood collection and to drive public-private partnerships that improve practices and conditions across a wide range of health initiatives such as HIV, cancer and TB. Prior to her current role, Ms. Gadde was leading the Emerging Markets Injection Safety platform at BD. During this period, she interacted with several international agencies and governments and played a key role in the formulation of safe injection policies that protect patients and healthcare workers. She was also instrumental in developing unique product solutions specifically suited for the emerging markets, and

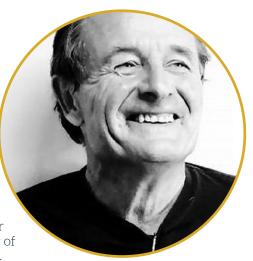
was the key contact for UNICEF supplies in Copenhagen and for driving programmes and policies with UNICEF, NY. Ms. Gadde has developed several key public-private partnerships that improve clinical practices and build capabilities within countries, including 4 partnerships with PEPFAR, the International Council of Nurses and UNICEF. All these partnerships aim to strengthen health systems and improve health care capacity across Sub-Saharan Africa. Ms. Gadde began her career In India where she worked for 5 years prior to moving to Singapore to work for BD in 1997. She was the Regional Director for Asia Pacific Immunization at BD. She has a Bachelor's degree in Sciences and holds a Master's degree in Business Administration. She serves on the board of World Neighbors, an NGO and is also on the Expert Advisory Council of University of Michigan. She is currently serving a second term as the Private Sector's Alternate Board Member to the Global Fund.

ERIC GOEMAERE

Regional HIV/TB Technical Support Coordinator, Médécins Sans Frontières (MSF)

Dr. Eric Goemaere is a medical doctor and economist by training. His career with MSF started in 1982, working in Chad and afterwards in several field MSF missions, with some 'interruptions' to be OCB's medical director (1988 to 1991) and General Director (1994 to 1999). In 1999, Dr. Goemaere migrated to South Africa to pioneer MSF's first public health ARV programme in Khayelitsha. Since then he has occupied numerous positions in running MSF's projects in South Africa, finally joining SAMU in 2009 where he is currently the HIV/TB Unit Coordinator.

Eric has received an Honoris Causa doctorate from University of Cape Town (UCT) for his work in HIV, as well as being appointed honorary senior lecturer in the School of Public Health and Family Medicine. He is a member of the South African AIDS Council and on the WHO guidelines advisory board.



RICHARD GORDON

Executive Director, Grants Innovation and Product Development, South African Medical Research Council (SAMRC)



Dr. Richard Gordon joined the SAMRC in April 2013. Prior to this, he worked for the Technology Innovation Agency (TIA) as a Senior Investment Specialist covering a wide range of technologies and specialities related to health. Before that, Dr. Gordon spent 10 years at BioFocus, a UK-based pharmaceutical drug discovery Contract Research Organization where he moved from the bench to business development. During this time held a number of international positions specializing in setting up research collaborations in target discovery, high throughput screening, medicinal chemistry, ADMET and pharmacology for a wide range of therapeutic areas. Several of these programmes are in clinical development. At his time of departure, Dr. Gordon was the global head of Business Development and Marketing overseeing teams in the US, EU and Asia Pacific. Dr. Gordon also represents Medicines for Malaria Venture in Africa where he is overseeing the

local development of Africa's first ever clinical candidate – MMV390048. Dr. Gordon completed his PhD at the University of Cape Town, and his post-doctoral fellowship at the University of Cambridge.

He is also a chartered marketer.



GLENDA GRAY

CEO and President, South African Medical Research Council (SAMRC)

An NRF A-rated scientist, CEO and President of the South African Medical Research Council (SAMRC), Professor Glenda Gray is a qualified paediatrician and co-founder of the internationally recognised Perinatal HIV Research Unit in Soweto, South Africa.

Prior to her appointment at the SAMRC, she was the Executive Director of the Perinatal HIV Research Unit, an affiliate of Wits University. Professor Gray's global profile includes a role as Co-Principal Investigator of the HIV Vaccine Trials Network (HVTN), a transnational collaboration for the development of HIV/AIDS prevention vaccines. She is also Director of International Programmes for HVTN and Chairperson of the Board of the Global Alliance for Chronic Diseases, and a member of the Institute of Medicine of the National Academies, USA.

She received South Africa's highest honour – the Order of Mapungubwe – for her pioneering research in PMTCT. Other prestigious accolades include the Nelson Mandela Health and Human Rights Award for her significant contributions in the field of mother-to-child transmission of HIV. Selected as one of Time's 100 Most Influential People in the World, Glenda is a recognised leader in her field. Her qualifications include an MBBCH, FCPaeds (SA) and she was awarded a DSc (honoris causa).

HUSNA ISMAIL

Epidemiologist, National Institute for Communicable
Diseases (NICD)

Dr. Husna Ismail is a Field Epidemiologist with formal training as a Medical Scientist. She works at the Centre for Hospital-Associated Infections, Antimicrobial Resistance and Mycoses at the National Institute for Communicable Diseases in Johannesburg, South Africa.

Dr. Ismail accumulated over 8 years' worth of experience in surveillance and outbreak response, and for the last 2 years, worked closely with the Communicable Disease Control Unit at the Gauteng Provincial Department of Health, Johannesburg, South Africa. She is currently involved in surveillance projects for antimicrobial resistance, including the Global Antimicrobial Resistance Surveillance System.



ANDREW JACK

Editor (FT Health), Financial Times; Board of Directors, FIND

Mr. Andrew Jack has worked as a journalist for the Financial Times since 1990. He runs the curated content team which picks the best news and analysis from the FT and the rest of the web. He was previously deputy editor of the analysis section, pharmaceuticals correspondent, Moscow bureau chief, Paris correspondent, financial correspondent, general reporter and corporate reporter.

He is author of the books *Inside Putin's Russia* and *The French Exception*, as well as numerous specialist reports, and has appeared on the BBC and other media outlets. He led the FT's coverage that won the communications award of the American Society of Tropical Medicine and Hygiene in 2011. He received the 2013 media award of the European Organisation for Rare Diseases; First Prize in the Stop TB Award for excellence in reporting for 2010; and a Kaiser Family Foundation mini-fellowship in global health reporting in 2008. Mr. Jack is co-

chairman of Pushkin House, a London-based independent centre for Russian culture, and a trustee of SciDev.net, a non-profit media group covering science and development. He graduated in geography from St Catharine's College, Cambridge, was the Joseph Hodges Choate Memorial Fellow at Harvard University and a New York City urban fellow.



FAROUK JEGA Senior Country Director Nigeria, Pathfinder

Dr. Farouk Jega is a public health physician with 15 years of progressive experience in programme management and evaluation. He serves as Pathfinder's country director in Nigeria, where he oversees technical and administrative aspects of a multi-million-dollar portfolio of projects in maternal health, family planning, HIV and AIDS, and advocacy. Before serving as country director, Dr. Jega was the programme manager for Pathfinder in Nigeria, where he managed several projects, including an innovative intervention to address maternal mortality through a multi-pronged community and health systems strengthening project.

Dr. Jega has considerable knowledge of the Nigeria public health and primary healthcare space, having worked closely and served on various planning committees with Federal and State Ministries of Health, including the National and State Primary Health Care Development Agencies. He has an MBBS from the University of Jos and an MPH from Liverpool School of Tropical Medicine.

YVON DE JONG

Project Officer, ReAct Africa

Mrs. Yvon de Jong is project officer for the Action Against Antibiotic Resistance (ReAct) Africa Node. ReAct advocates for the adoption of a holistic view of the problem of antibiotic resistance and solutions that engage all of society. She has been project officer since 2016, working closely with the Executive Director, Dr. Mirfin Mpundu.

She is heavily involved in the ReAct Africa conference. Since 2013, Mrs. De Jong has also been project officer and monitoring and evaluation coordinator for the Ecumenical Pharmaceutical Network (EPN), which supports the faith-based health sector to provide and promote just and compassionate pharmaceutical services. Mrs. De Jong previously worked as a pharmacist in a hospital in the Netherlands with a focus on clinical pharmacy and quality management. She holds both her Master and Bachelor degree in Pharmaceutical Sciences from the University of Utrecht, The Netherlands. She is currently based in Nairobi, Kenya.



MAH-SÉRÉ KEITA

Director of Global Health Security, African Society for Laboratory Medicine (ASLM)

Ms. Mah-Séré Keita is a public health professional with 15 years of experience managing global health programmes, particularly in the fields of public health workforce development and improving the diagnosis of infectious diseases in low-resource settings. She is currently the Director of Global Health Security at the African Society for Laboratory Medicine (ASLM), and has previously held leadership positions at the Catholic Relief Services – Mali, American Society for Microbiology (ASM), and Association of Schools and Programs of Public Health (ASPPH).

Ms. Keita holds a Master's in Public Health (MPH) with a focus on infectious disease epidemiology from the Johns Hopkins Bloomberg School of Public Health and a Bachelor of Science (BSc) in pre-medicine biology from Boston College.



ILONA KICKBUSCH

Director, Global Health Centre & Adjunct Professor, Graduate Institute of International and Development Studies; Board of Directors, FIND

Dr. Ilona Kickbusch graduated from the University of Konstanz, Germany, with a PhD in Political Science. She contributed to the first academic studies in Germany on consumer-centered health care, the self-help and the women's health movement. After joining WHO, she was appointed to lead the Global Health Promotion Programme, followed by senior positions at the regional and global level of the organisation. She then joined Yale University to head the new Global Health Program at the Yale School of Public Health.

On returning to Europe, Dr. Kickbusch took up senior positions as chairperson of the World Demographic & Ageing Forum, St Gallen, director of the Global Health Programme at the Graduate Institute of International and Development Studies, Geneva, and chair of Global Health Europe. In Switzerland, she serves on

the executive board of the Careum Foundation. She teaches regularly at several academic institutions including the University of St. Gallen (HSG), Switzerland.

LYNETTE MABOTE

Regional Programmes Lead, AIDS & Rights Alliance for Southern Africa (ARASA)

Ms. Lynette Mabote is the Regional Programmes Lead at ARASA (AIDS & Rights Alliance for Southern Africa). She holds an LLB degree from Rhodes University and a post-graduate diploma in Advanced Labour Law and Alternative Dispute Resolution. She also holds a certificate in Intellectual Property and Access to Medicines from the University of Kwazulu Natal.

Ms. Mabote has worked on numerous projects and programmes in public health. She currently represents ARASA at the African Commission for Human and Peoples' Rights (ACHPR), and is instrumental to SADC level processes as well as at international fora. Ms. Mabote has extensive experience in TB/HIV, public health and funding policy issues within Southern Africa and broader sub-Saharan Africa.



MARTIN MATU

Medical Laboratory Specialist, East, Central and Southern Africa Health Community (ECSA-HC)

Dr. Martin Matu is Medical Laboratory Specialist with a wealth of experience in management of health programmes, training, laboratory systems strengthening and disease surveillance. He is currently the Project Coordinator of the World Bank-funded East Africa Public Health Laboratory Networking project (EAPHLN) Project; the Southern Africa TB and Health Systems Support (SATBHSS) Project; and the Regional Project for Cancer Registries for East Africa, based at the East Central & Southern Africa Health Community (ECSA-HC).

He is responsible for coordinating the regional implementation of the three World Bank projects in Eastern and Southern Africa whose focus is to strengthen diagnostic, disease surveillance, TB and occupational lung diseases management, and facilitating knowledge exchange among the regional experts involved in the various projects. Dr. Matu is championing a programme

for antimicrobial surveillance under the projects. He participated in a regional capacity assessment of the laboratories in East Africa for readiness to enroll in an AMR surveillance network, and co-authors the chapter on laboratory-based AMR surveillance in the World Bank report on "Drug-resistant infections: a threat to our economic future".

Dr. Matu holds a PhD (Public Health), MSc (Biotechnology and Molecular Biology) and MBA (Health Systems Management), as well as several professional qualifications. Dr. Matu previously worked as Manager of the Laboratory Programme at Amref Health Africa, University of Nairobi, Institute of Tropical and Infectious Disease (UNITID) and Kenya Medical Research Institute (KEMRI).



MARC MENDELSON

Co-Chair South African Antibiotic Stewardship Programme President-Elect of the International Society for Infectious Diseases

Professor Marc Mendelson is Professor of Infectious Diseases and Head of the Division of Infectious Diseases & HIV Medicine at Groote Schuur Hospital, University of Cape Town (UCT).

He studied Medicine at St Mary's Hospital, London and specialized in Infectious Diseases at Addenbrookes Hospital, Cambridge, where he attained his PhD. He moved to The Rockefeller University, New York in 2001 and subsequently to UCT to work on tuberculosis and innate immunity. Professor Mendelson is Chair of the Ministerial Advisory Committee on Antimicrobial Resistance, the South African lead for Antimicrobial Resistance on the Global Health Security Agenda, co-chair of the South African Antibiotic Stewardship Programme, and co-author the South African Antimicrobial Strategic Framework. He is on multiple WHO technical advisory panels relating to antibiotic resistance, is a member of the scientific advisory

group of the Global Antibiotic Research and Development Partnership (GARDP), and a member of the AMR Core Team of the World Economic Forum/Wellcome Trust collaboration on implementing new models of antibiotic R&D.

He is Past-President of the Federation of Infectious Diseases Societies of Southern Africa, and President-Elect of the International Society for Infectious Diseases.

CHISOMO MSEFULA Senior Lecturer, University of Malawi

Professor Chisomo Msufela is a Research Scientist and Associate Professor at the College of Medicine, University of Malawi, Blantyre, Malawi. His research focus has largely been on describing the molecular epidemiology of multidrug resistant enteric bacterial pathogens in Malawi and sub-Saharan Africa.

His team has identified and described resistance genes and mobile genetic elements in Salmonella, E.coli and Klebsiella spp. He is also part of a team that has rolled out a two-year MSc training in antimicrobial stewardship at the College of Medicine that started in November 2017. Recently the scope of his work has expanded to include diagnosis of invasive Salmonellosis in blood using PCR, and also evaluating the LAMP assay for diagnosis and screening of Group B Streptoccoci in women and neonates.



Laboratory Advisor, Southern Africa Medical Unit (MSF)

Mr. Zibusiso Ndlovu holds a BSc. Hons. in Medical Laboratory Sciences (University of Zimbabwe), MSc in Epidemiology and Biostatistics (University of Witwatersrand) and other qualifications in project management and M&E.

He has previously worked as a medical laboratory scientist in public and private diagnostic laboratories, and has also practised as an epidemiologist.

As from December 2014, he joined MSF as the research coordinator for the Zimbabwe project. He joined SAMU in January 2016 and provides support to MSF programme laboratories in the region.



DAVID PARIRENYATWA

Minister of Health, Zimbabwe

Dr. Pagwesese David Parirenyatwa has served in the government of Zimbabwe as Minister of Health since 2013 and previously from 2002 to 2009. He is a medical doctor by profession.

Dr. Parirenyatwa served as Deputy Minister of Health and Child Welfare until he was appointed as Minister of Health and Child Welfare in August 2002. He is Africa champion of the Global HIV Prevention Coalition.

ROSANNA PEELING

Professor and Chair of Diagnostics Research, London School of Hygiene and Tropical Medicine (LSHTM); Director, International Diagnostics Centre (IDC)

Professor Rosanna Peeling is currently Professor and Chair of Diagnostics Research at the London School of Hygiene and Tropical Medicine (LSHTM) and Director of the International Diagnostics Centre (IDC).

Trained as a medical microbiologist, Professor Peeling had been Research Coordinator and Head of Diagnostics Research at the UNICEF/UNDP/ World Bank/WHO Special Programme on Research and Training in Tropical Diseases (WHO/TDR) in Geneva, Switzerland, and the Chief of the Canadian National Laboratory for Sexually Transmitted Diseases before assuming her current position.

Her work at WHO/TDR focused on the evaluation of diagnostics appropriate for developing countries settings, to inform policy and procurement decisions. Her work at LSHTM spans from facilitating test development and evaluation to translation of evidence to policy, appropriate placement of new diagnostic technologies into different health care settings to ensure maximum impact, and innovation in the uptake of testing by marginalised populations. She established the IDC to provide a global hub for advocating the value of diagnostics, fostering innovation, and accelerating regulatory approval and access to quality-assured diagnostics to improve global health.

In 2014, she was awarded the George MacDonald Medal by the Royal Society of Hygiene and Tropical Medicine for contributions to tropical medicine, becoming the first woman to receive this honour.





YOGAN PILLAY

Deputy Director-General, National Department of Health, HIV & AIDS, TB and Maternal, Child & Women's Health

Dr. Yogan Pillay is the Deputy Director-General for Health in South Africa. He is responsible for policy making, guiding implementation, and monitoring of national programmes in HIV, TB and maternal, child and women's health. He is also currently facilitating the implementation of a national programme to re-engineer the primary health care system in South Africa. Dr. Pillay has contributed to a large number of journal articles including co-authorship of papers on financing of HIV and AIDS programmes and drug resistant TB. He is a co-author of the Textbook of International Health: Global health in a Dynamic World.



LOUIS ROUX

Managing Director, LifeAssay Diagnostics

Mr. Louis Roux is the Managing Director and CEO of Lifeassay Diagnostics (LAD), a Cape Town based biotech company involved in the design, research, development, production and commercialisation of point-of-care diagnostic tests.

He has taken LAD from startup to being a leading supplier of specialised tests to customers across the world including the S.A. Department of Health, the Namibian Department of Health, Doctors Without Borders (MSF), the Centers for Disease Control and Prevention (CDC, Atlanta), the US Navy and various private distributors across many countries worldwide.

Under Mr. Roux's direction, many collaborations with leading institutions have been formed, including the S.A. Medical Research Centre, NEPAD/BIOFISA, and PATH. Mr. Roux and his team of scientists are focusing on tests for poverty-related infectious diseases such as brucellosis, typhoid, leptospirosis, HIV, and hepatitis. Under his direction, a ISO13485:2016 quality management system was

successfully implemented in 2016. Most of LAD's products are either FDA listed and/or CE marked. Mr. Roux holds an MSc degree from Pretoria University.

CAROL RUFFELL

Head of South Africa Liaison Office, Global Antibiotic R&D Partnership (GARDP), Drugs for Neglected Diseases initiative

Ms. Carol Ruffell is an experienced specialist in the global public health sector, having worked primarily within the HIV/AIDS and TB arena. She is also an experienced executive with knowledge of the global public health system and good insight of the Southern African health sector. She has more than 20 years of experience in the corporate pharmaceutical industry (J&J, GSK, Adcock Ingram) and in community pharmacy. She holds a Bachelor of Pharmacy from Rhodes University, a Master's in Public Health from the University of Liverpool, and a certificate in Business Project Management.

The Global Antibiotic Research and Development Partnership (GARDP) was established in May 2016 as a joint initiative by the World Health Organization (WHO) and the Drugs for Neglected Diseases initiative (DNDi). As an important element

of the WHO Global Action Plan on Antimicrobial Resistance, this not-for-profit research and development (R&D) initiative addresses global public health needs by developing and delivering new or improved antibiotic treatments while endeavouring to ensure sustainable access. In November 2017, DNDi and GARDP opened a new liaison office in Cape Town, South Africa. The office will work in close collaboration with a broad range of partners across the South African government, academia, hospitals, and civil society on the development of R&D programmes on paediatric HIV, hepatitis C, and antibiotic resistance, and will be headed by Ms. Ruffell.



Professor Ian Sanne (MBBCh, FCP (SA), FRCP (Lon), DTM&H) is the founding director and Chief Executive Officer of Right to Care, including Right Health Services. He is an Associate Professor of Internal Medicine and Infectious Diseases, University of the Witwatersrand, and Adjunct Professor at the Centre for International Development, Boston University. He is Division Head of the Clinical HIV Research Unit, the International Vice-Chair of the AIDS Clinical Trials Group (NIH), and a director of the Health Economics and Epidemiology Research Office.

Professor Sanne sits on the board of the South African national prioritization and guideline committee for HIV and tuberculosis. He is a member of the Executive Committee, Department of Internal Medicine, University of the Witwatersrand. He is a member of numerous scientific committees.

ROBERT SAMBURSKY

President, Chief Technology and Medical Officer, RPS Diagnostics

Dr. Robert Sambursky is one of the original founders of RPS Diagnostics, and has served various roles including Chief Executive Officer from July 2012 until June 2017, President since 2010, and Chief Medical Officer since 2008. Currently Dr. Sambursky continues to serve as President as well as Chief Technology and Medical Officer, where his leadership responsibilities include strategic planning and business development, oversight of innovation, research and new product development, and leading clinical and regulatory affairs, key opinion leader development, health policy and government affairs, reimbursement, and evidence-based marketing. He is an inaugural member of both the Leadership Team and Board of Directors.

Dr. Sambursky has a strong scientific and clinical background in medical sciences, ophthalmology, and infectious disease. He conceived numerous patents, developed a point-of-care (POC) diagnostic platform, designed clinical protocols, and served as the regulatory interface that led to multiple POC diagnostic tests obtaining international regulatory clearances as well as both U.S. FDA 510(k) clearance and CLIA waiver designations. He is considered a subject area expert and serves as a global spokesperson. Dr. Sambursky is a practicing, board-certified ophthalmologist with fellowship training in refractive surgery and corneal external and infectious disease. Dr. Sambursky earned his BA in Biology from Brown University, MA in Medical Sciences with a concentration in biochemistry and microbiology from Boston University, and MD from Boston University School of Medicine. He completed his medical internship at Harvard's Mount Auburn Hospital and both his ophthalmology residency and cornea fellowship at Wills Eye Hospital in Philadelphia.

WENDY STEVENS

Professor and Head, University of the Witwatersrand and the National Health Laboratory Services (NHLS); Principal Investigator, iLEAD (Innovation: Laboratory Engineered Accelerated Diagnostics)

Professor Wendy Stevens qualified as a medical doctor from the University of the Witwatersrand in Johannesburg, South Africa, with cum laude in 1989. She was appointed first as acting Head of the Department of Molecular Medicine and Haematology and full professor and Head in 2003. She now holds a joint position with the National Health Laboratory Service (NHLS) and the University of the Witwatersrand. As a haematologist, her initial focus was working in the field of leukaemia and lymphoma using the flow cytometry and molecular PCR testing platforms, but she soon realised as the HIV epidemic in South Africa exploded there was urgent need to apply these testing platforms and skill to laboratory tests for HIV infected individuals. Professor Stevens is currently assisting with the establishment of a National

Drug Resistance Task Team to address not only annual surveillance but surveillance of resistance at several sentinel sites throughout the country and of course the development of a database that is accessible for policy-making. In 2010, Professor Stevens saw the need to not only continue strengthening the HIV centralised laboratory programme, but to integrate within this a national laboratory programme for rapid diagnostic testing for TB. She formed the National Priority Programme (NPP) within the NHLS, drawing largely from her HIV laboratory and R&D team to implement the new WHO-endorsed Xpert MTB/RIF (Cepheid) test. Professor Stevens has also recently created a multidisciplinary team to focus on extending both HIV and TB testing laboratory models to investigate the potential for providing such testing at point-of-care (POC) directly in primary health care clinics. Professor Stevens has been a strong supporter of laboratory upliftment across Africa and has developed training courses for Good Laboratory Practice (GLP), Good Clinical Laboratory Practice, CD4, and viral load. She has transferred her programmes and experience to the development of laboratories in countries such as Kenya, Rwanda, Tanzania and Uganda. Professor Stevens was one of the four founding members of the Wits Health Consortium, mostly supporting HIV-related research. During her career, Professor Stevens has shared her experience and worked on various working groups within the WHO such as in HIV diagnostics forums, viral load, CD4, EID and drug resistance workshops. In addition, she has been an advisor to PEPFAR, CDC, the Clinton Foundation and the Bill & Melinda Gates Foundation. More recently, she contributes to workshops held by the NIH on point-of care and TB and HIV. Professor Stevens serves as a board member for ASLM.



SHEILA D. TLOU

Chair, Global HIV Prevention Coalition Board of Directors, FIND

Professor Sheila Dinotshe Tlou is the Chair of the Global HIV Prevention Coalition. From 2010 to June 2017 she was Director of the UNAIDS Regional Support Team for Eastern and Southern Africa. She is a former Member of Parliament and Minister of Health of the Republic of Botswana (2004–2008). She is also former Professor of Nursing at the University of Botswana and Director of the WHO Collaborating Centre for Nursing and Midwifery Development in Primary Health Care for Anglophone Africa.

Professor Tlou was HIV/AIDS Coordinator at the University of Botswana from 2002 to 2004, and facilitated the formation of the Students Against AIDS Society (SAHA). She is the founder of the Botswana chapter of the Society of Women and AIDS in Africa (SWAA), in which volunteers are trained in home-based care and educate families on HIV prevention, human rights, and caring for people living with AIDS.

Professor Tlou holds a PhD in Nursing Sciences and Post-Graduate Certificates in Women's Health and Gender Studies, from the University of Illinois at Chicago. She has a Masters' degree in Nursing Education and Instruction from Columbia University, and a Master of Science in Nursing from the Catholic University of America. She completed her Bachelor of Nursing degree at Dillard University in New Orleans in 1974. She published widely on gender issues relating to HIV and AIDS, older persons, menopause, and community-based approaches to HIV prevention.

She has provided consultancy for the World Health Organization, UNAIDS, the International Council of Nurses, and the United Nations Commission on the Status of Women. She has received many national and international awards, among them the Botswana Presidential Order of Honor, the Florence Nightingale Award from the International Red Cross Society, the Trailblazer Woman Leading Change Award from the World YWCA, the Leadership in Health award from the Global Business Council (Health), the President award from the US National Academy of Nursing, the President award from the US National League for Nursing, the Princess Srinagarindra award from Thailand, and the Christianne Reimann award from the International Council of Nurses. She is the United Nations Eminent Person for Women, Girls, and HIV/AIDS in Southern Africa, and the International Council of Nurses Goodwill Ambassador for Girl Child Education.

SIMON TRAVERS

Associate Professor, South African National Bioinformatics Institute (SANBI)

Professor Simon Travers is the Principal Investigator of the HIV molecular evolution research group. He graduated from his undergraduate degree in Biotechnology at the National University of Ireland, Maynooth in 2001 and completed his PhD (Bioinformatics) in 2004 also at NUI Maynooth.

Following his PhD, he undertook post-doctoral research with Dr. Mario Fares in NUI Maynooth and Trinity College, Dublin. In late 2006, he received funding from the Irish Health Research Board (HRB) and established his research group initially in NUI Maynooth, before moving to NUI Galway. He is currently employed as an Associate Professor at the South African National Bioinformatics Institute (SANBI) where he has been since April 2010.





LAURA TRIVINO Medical Coordinator Khayelitsha, Médécins Sans Frontières (MSF)

Dr. Laura Trivino is a registered nurse and a MD who holds a Diploma in International Relations (CIDOB, Barcelona, Spain) and a Masters in Public Health from the London School of Hygiene and Tropical Medicine.

She worked in Spain as a GP before joining MSF 12 years ago. Since then she has worked in different countries including Nepal, Zambia, Uganda, Lesotho, Malawi, India and currently in South Africa implementing HIV and TB (including MDR-TB) as field doctor and lately as a medical coordinator in various MSF projects.

JAY K. VARMA Senior Advisor, Africa CDC

Dr. Jay K. Varma is the Senior Advisor to Africa CDC. Based in Addis Ababa, Ethiopia, Dr. Varma provides programme and technical support to the African Union for the establishment of a new public health agency.

From 2011 to 2017, Dr. Varma served as the Deputy Commissioner for Disease Control at the New York City Department of Health and Mental Hygiene. Dr. Varma directed the public health laboratory and all infectious disease control programs for New York City, including HIV, tuberculosis, sexually transmitted infections, vaccine-preventable diseases, and general communicable diseases. He led New York City to achieve record lows in HIV and TB incidence and record highs in childhood immunization coverage, built new programs for hepatitis C, STDs, HIV, Legionnaires' Disease, advanced molecular diagnosis, and data management, and served as incident commander for nine city-wide emergencies.

After graduating magna cum laude with highest honours from Harvard, Dr. Varma completed medical school, internal medicine residency, and chief residency at the University of California, San Diego School of Medicine. In 2001, he joined CDC's Epidemic Intelligence Service, working on foodborne diseases. From 2003 to 2008, he served in Bangkok, Thailand, directing CDC's TB programs and research in Southeast Asia. From 2008 to 2011, he served in Beijing, China, directing CDC's International Emerging Infections Program which assisted the Chinese government on infectious diseases. Dr. Varma has authored over 100 scientific manuscripts, six essays, and one book.

A captain in the US Public Health Service, he has been recognized as the US Public Health Service Physician Researcher of the Year (2010) and Physician Leader of the Year (2017). In 2011, he was awarded the Distinguished Service Medal, the highest award in the US Public Health Service.

DIAGNOSTICS SHOWCASE

BD (BECTON, DICKINSON AND COMPANY)

www.bd.com

BD is a global medical technology company that is advancing the world of health by improving medical discovery, diagnostics and the delivery of care. BD leads in patient and health care worker safety and the technologies that enable medical research and clinical laboratories. BD has nearly 60,000 associates across 50 countries who work with customers to help enhance outcomes, lower health care delivery costs, increase efficiencies, improve health care safety and expand access to health.

BD is developing a rapid test that will aid in differentiating bacterial from viral infections at the point of care.

CEPHEID

www.cepheidinternational.com

Cepheid is a leading molecular diagnostics company that is dedicated to improving healthcare by developing, manufacturing, and marketing accurate yet easy-to-use molecular systems and tests. By automating highly complex and time-consuming manual procedures, the company's solutions deliver a better way for institutions of any size to perform sophisticated genetic testing for organisms and genetic-based diseases. Through its strong molecular biology capabilities, the company is focusing on those applications where accurate, rapid, and actionable test results are needed most, such as managing infectious diseases, virology and cancer.

With more than 15,000 systems in 182 countries, including more than 7,000 in high burden developing countries, the GeneXpert® System is the world's most popular molecular diagnostics' system. The GeneXpert System's modular configuration means that the system is the most scalable available, offering the ability to perform from one to eighty Xpert tests at the same time. As a result, the GeneXpert System meets the throughput requirements of customers of all sizes – from lower volume point-of-care settings to higher volume reference laboratories – enabling accurate, fast and cost effective test results. GeneXpert Systems run proprietary Xpert test cartridges. The Xpert test menu spans healthcare-associated infections, sexual health, virology, critical infectious disease, and oncology, and today offers 27 tests.

HYRAX BIOSCIENCES / SANBI

https://hyraxbio.co.za

Hyrax Biosciences is a South African bioinformatics company, spun out of the University of the Western Cape (UWC), which creates user-friendly, end-to-end software solutions that accurately analyse DNA data and reduce complex sequencing data to clear clinical reports.

Hyrax was established in 2015 by Prof Simon Travers and three other co-founders as a result of the work done on HIV drug resistance detection by Prof Travers and his team at the South African National Bioinformatics Institute (SANBI) in UWC. Together they developed Exatype, a cloud-based software platform which supports DNA sequencing for low-cost, highly scalable DNA-based diagnostics.

Designed originally to identify mutations in HIV DNA at very low prevalence, the requirement for accurate mutation detection was found to be pertinent to many other diseases and Exatype has been used successfully to accurately detect resistance in TB and other bacteria such as Staph Aureus. Exatype can work via a web interface, connect directly to a DNA sequencing machine or be available as a local version. Exatype "separates the true signal from the noise" to accurately identify genetic mutations, and report the drug resistance profile, of an infection. In addition, a surveillance database that allows for easy visualisation of resistance trends and 'hotspots' within populations is in development.

LIFEASSAY DIAGNOSTICS

www.lifeassay.com

Lifeassay Diagnostics is a Cape Town based biotechnology company, specializing in in vitro diagnostic tests for human and animal application. The company has two production units, focusing on manufacturing of lateral flow tests for poverty-related infectious diseases and urinalysis tests. The current products offered include lateral flow rapid tests for typhoid fever, brucellosis, hepatitis B, and leptospirosis. A new HIV screening test has been developed and will be submitted for WHO prequalification by 2019. Certain exciting new product developments are being undertaken which include a new non-invasive ratiometric screening test for proteinuria (application in preeclampsia), and a PCR-based kit to distinguish between viral and bacterial pneumonia.

As part of the company's strategy, Lifeassay management plans to include manufacturing of specialized medical devices starting in 2019. Lifeassay products are currently sold in more than 18 countries worldwide. Lifeassay customers include the National Department of Health, the Centers for Disease Control & Prevention (Atlanta), and Doctors Without Borders (MSF) amongst others. Lifeassay production facility is ISO 13485:2016 certified. All manufactured products either carry the CE mark or are US FDA listed.

MEDICAL DIAGNOSTECH

www.medi-tech.co.za

Medical Diagnostech Pty Ltd develops and manufactures high-quality lateral flow diagnostic tests for early detection of infectious and communicable diseases in humans. The company recently partnered with Grit Overseas Pte Ltd, forming an alliance to work under the "GMD" brand. Medical Diagnostech currently manufactures a range of tests that cover diseases such as HIV, syphilis and malaria (P.f, P.f /P.V., P.f /PAN (pLDH), while a new crop of diagnostic tests are being evaluated and developed for the detection of dengue NS 1 antigens, dengue IgG/IgM combo and Chikungunya, for markets outside the African continent such as South and South East Asia.

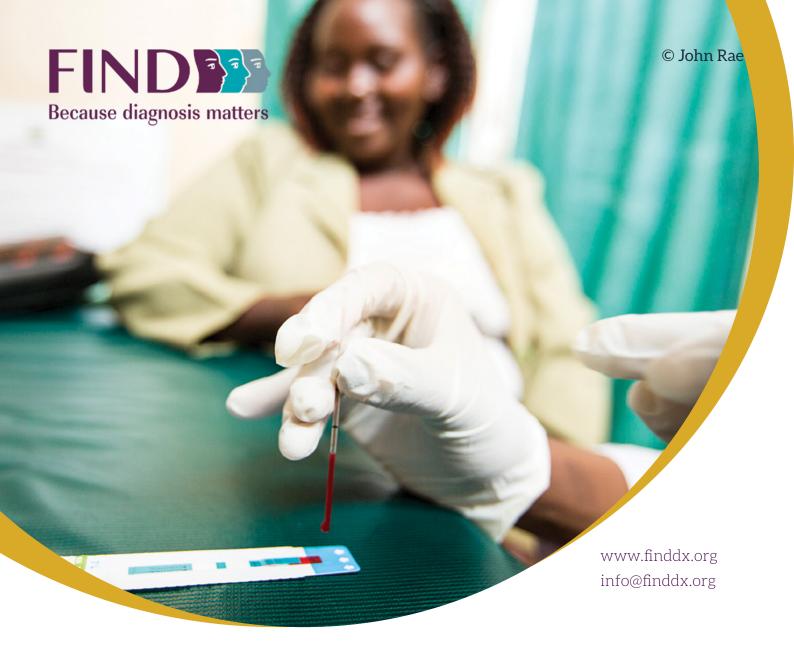
The company is working towards WHO prequalification for their products and facility to enable a reach to international and governmental institutions. Through its products, Medical Diagnostech aims to empower the public to take timely and efficient action, to avoid over- or under-treatment of an illness.

RPS DIAGNOSTICS

www.RPSdetectors.com, www.FebriDx.com

RPS Diagnostics (RPS) is an emerging developer, manufacturer, and marketer of cost-effective point-of-care (POC) tests for systemic infectious disease and antibiotic stewardship.

The company's innovative and patented FebriDx® test is a rapid, disposable, in-office test that uses a fingerstick blood sample to help identify a clinically significant immune response and differentiate bacterial from viral causes for fever in acute respiratory infection. With a 97% negative predictive value, FebriDx® delivers results in 10 minutes and can be used to help triage infectious patients during the initial office visit, providing clinicians with actionable information that can be used to limit unnecessary antibiotics. The FebriDx® test is simple to perform and has received HealthCanada approval, Saudi Arabian and Singapore FDA approval, and is CE marked for European sale.



Without diagnostics, medicine is blind¹

Diagnosis is the first step on the path to treatment and the foundation of disease control and prevention. Diagnostic tests support robust clinical decision-making and help to ensure the use of appropriate treatments – thereby improving the efficiency of health care spending and guiding the appropriate use of antibiotics that help us to fight antimicrobial resistance. Diagnostic tests are also the foundation of disease surveillance and elimination.

Accurate diagnosis saves lives

FIND is an international non-profit organization that enables the development and delivery of much-needed diagnostic tests for poverty-related diseases, including tuberculosis, malaria, HIV/AIDS, sleeping sickness, hepatitis C, leishmaniasis, Chagas disease, Buruli ulcer, febrile illnesses and infectious diseases with outbreak potential, such as Ebola.

The organization acts as a bridge between experts in technology development, policy and clinical care, reducing barriers to innovation and effective implementation of diagnostic solutions in low- and middle-income countries.

FIND has active collaborations with more than 200 partners, including research institutes, academia, health ministries and disease control programmes, commercial partners, the World Health Organization, bilateral and multilateral organizations, and clinical trial sites – across Africa and globally.

Since its inception, FIND has partnered in the delivery of 21 new diagnostic tools, including ten for tuberculosis, and has created an enabling environment for numerous others through the provision of specimen banks, reagent development and better market visibility. FIND's work in these areas reflects a willingness to address market entry barriers for diagnostics globally. FIND also supports the appropriate use of diagnostics in many countries through training programmes, quality assurance programmes and laboratory strengthening work.



Overview

The South African Medical Research Council (SAMRC) was established in 1969 with a mandate to improve the health of the country's population, through research, development and technology transfer, so that people can enjoy a better quality of life.

The scope of the organisation's research projects includes tuberculosis, HIV/AIDS, cardiovascular and non-communicable diseases, gender and health, and alcohol and other drug abuse. With a strategic objective to help strengthen the health systems of the country – in line with that of the Department of Health, the SAMRC constantly identifies the main causes of death in South Africa.

By analysing the causes and categories of death, data would become available to formulate suitable interventions to either prevent diseases in a certain

population group or improve the standard of living of people living with existing medical conditions.

In addressing the ills of the people, the SAMRC has set up a dedicated funding department to pay for the development of novel treatment regimens, especially vaccines, as well as improved diagnostic tools. This project is intended to localise the production of new drugs and devices, and thereby allow the South African economy to grow.

The SAMRC further distinguishes and awards scientific excellence with its annual Scientific Merit Awards Gala Ceremony. These awards acknowledge the contributions of established scientists on the one hand, while recognising fresh scientists with ground-breaking efforts in their individual fields of science, engineering and technology.

www.samrc.ac.za



