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The Alliance for Accelerating Excellence in Sciences in Africa (AESA) is launched

The African Academy of Sciences

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MESSAGE FROM THE AAS PRESIDENT

Prof Aderemi Kuku, AAS President

It is indeed my singular honor and privilege to write this message soon after the memorable event of Launching AESA (Alliance for Excellence in Science in Africa)--and two of its constituent parts DELTAS (Developing Excellence , Leadership, Training and Science) and GCA (Grand Challenges Africa). AESA, a Pan-African Platform meant to foster sustainable development of research capabilities and promotion of scientific excellence through open calls for proposals with transparent review process, actively manage grants, as well as evaluate and measure the impact of such investments. The AESA is funded by the Bill and Melinda Gates Foundation, Wellcome Trust and the UK Department of International Development (DFID) .

The Launching of DELTAS funded by the Wellcome Trust and the UK Department of International development (DFID) coincided with the award of big grants to seven leaders of Scientific research in Africa, namely Dr. Dixon Chibanda of the University of Zimbabwe Africa Mental Health Initiative, Prof Alison Elliot, Makerere University Virus Research Institute, Prof. Tobias F. Chirwa of the University of Witwaterstrand (Bio-Statistics); Prof Abdoulaye Djimde , of the University of Science Techniques and Technology for Genetic Training for Malaria Elimination in sub-Sahara Africa; Dr. Samson M. Kinyanjui of KEMRI-Wellcome Trust Research Program, Kenya;Prof T humbi Ndung'u of Kwazulu-Natal Research Institute for Tuberculosis and HIV. On behalf of AAS, I like to congratulate all of them. The GCA , is targeted to address Africa's developmental challenges and complements the global success of Grand challenges programs in India, Brazil, South Africa , Canada etc. The GCA will initially support the 400 existing Grant Challenges grantees in Africa.

The Ishango Bone is indeed a befitting scientific symbol to commemorate the Launching of AESA since it will be a permanent reminder at AAS of a great historical African achievements in the field of Mathematics---the Queen of all sciences. This bone, which is about 22, 000 years old, and has notches which suggest some understanding of the principle of multiplication and division by 2, as well as exhibits prime numbers between 10 and 20 and some numbers that are almost multiples of ten---is the oldest known record of mathematics knowledge in the world. It is believed that mathematics knowledge which originated in central Africa travelled along the Nile river to the Egyptians, and then the Babylonians, Indians, Chinese, Arabs, Mayans , – the inhabitants of the so-called third world countries – before becoming dominated in the last seven hundred years by the Europeans and their cultural affiliates like Australians, USA nationals Canadians, and refined into the western oriented mathematics that constitutes the bedrock of modern development. It is interesting that the developing countries, Africa inclusive , now got these modern trends re-exported back to them through colonial education. Well, by having the Ishango bone around us, we can always say confidently—"But we started it".

There are some other important items reported in this Newsletter beyond AESA Launching—e.g the first bilateral symposium between KAST (Korean Academy of science and Technology) and AAS which took place July 6-7 , 2015. The interesting story behind this close scientific collaboration between AAS and KAST bears telling: There was a fourteen year old dormant MoU between AAS and KAST until August 2014 when I visited Seoul to attend the International Congress of Mathematicians and I made contact with Professor Park, President of KAST and we both decided to revive this MoU. It turned out one of the very interesting joint activities in the MoU is a bilateral symposium to be held in alternate years in Africa and Korea on various scientific topics. This year, the topic was " Recent Advances in Biosciences and Biotechnology for socio-economic development" and ten speakers –five from KAST and five from AAS explored various aspects of this topic. It was indeed a memorable scientific event. The topics covered are outlined in this edition of the Newsletter.

Another interesting unprecedented AAS activity was the First AAS Pan-African Science Olympiads (PASO) which took place at Abuja, Nigeria August 23-28, 2015 under the auspices of the AAS Commission on Pan-African Science Olympiads. The Olympiads was hosted by Nigeria--thanks to the Nigerian Federal Ministry of Education and the National Mathematical Centre in Abuja. There is a report written by Professor Nobert Hounkonnou on the Olympiads in this Newsletter that should make interesting reading. The AAS commission on PASO was one of the four commissions created by AAS Governing council last year, the others being AAS Commission on Science Education; AAS Commission on African Scientific Heritage and AAS Commission on Women in Science in Africa. These Commissions aim to increase AAS visibility on the African Continent, popularize science and the PASO has in particular promoted healthy scientific interactions and competitions among African youths and also encouraged African Youths in solving scientific problems.

It is now my great pleasure to thank most heartily all those who contributed to the success of the Launching of AESA, DELTAS GCA. I feel grateful to Her Excellency Dr Ammenah Gurib Fakim, the President of Mauritius, His Excellency Dr DePaul Ikounga, the Commissioner for Human Resources , Science and Technology of the AUC, His Excellency Prof Kaimenyi, the Cabinet Secretary for Education, Science and Technology in Kenya, all the Representatives of the funders—Bill and Melinda Gates Foundation, Wellcome Trust, UK-DFID, members of the AAS secretariat and all others who graced the memorable occasion with their presence.

From the ED's Desk

The African Academy of Sciences (AAS) has moved to whole new level with the launch of AESA. Fifteen months ago, AESA was only a vague idea in the minds of a few of us in the African Academy of Sciences (AAS), the Welcome Trust (WT), the Bill & Melinda Gates Foundation (BMGF), DFID and NEPAD.

For AAS and NEPAD, AESA means the establishment and operationalization of a research and innovation platform, initially in the health field, but embracing other areas of concern thereafter. Although the partner organizations are best qualified to articulate what AESA is all about, I firmly believe that AESA meets their objective of identifying an Africa-based organization that they can "co-design" with in order to support and engage African scientists in transformational developmental projects for Africa.

Four teams headed by Dr Aggrey Ambali, Dr. Kevin Moses, Mr Haddis Tadesse, and Dr. Julia Kemp from the NEPAD Agency, Welcome Trust, BMGF and DFID, respectively, participated in the colorful and well attended launch of AESA.

The launch was also attended by key stakeholders and dignitaries. Top on the list was Her Excellency Dr Ameenah Gurib-Fakim, President of the Republic of Mauritius (AAS fellow and member of the Governing Council of AAS), HE Prof Jacob Kaimenyi, Cabinet Secretary for Education, Science and Technology, representing the Government of Kenya, HE Martial DePaul Ikounga, Commissioner for Human Resources, Science and Technology of the African Union Commission (AUC), HE Sahle Work Zewde, Director General of United Nations Office in Nairobi (UNON), and several ambassadors and heads of missions, including Dr. Christian Turner (UK), Mrs Roxane de Bilderling (Belgium), Mr Michele Mbare (Congo) and Mr Dina Mufti (Ethiopia), etc.

Two major announcements made during the launch were:

1) Seven projects funded under the Developing Excellence in Leadership, Training and Science Africa programme (DELTAS), funded by The Wellcome Trust and the UK Department for International Development (DFID). These African health research projects will share US$70 million over five years to build capacity, solve local health problems and train young researchers. DELTAS is about creating excellent research leaders on the continent;
2) The Grand Challenges Africa programme by the Bill & Melinda Gates Foundation, a new grant programme to help African researchers tackle local challenges.

The launch culminated with the unveiling of the enlarged laser-engraved glass replica of the Ishango bone. This 22,000 year old bone was discovered in Ishango (DRC) in 1957 by a Belgian Archaeologist, Jean de Heizelin de Braucourt, and is kept at the Royal Belgian Institute of Natural Sciences, Brussels, Belgium. The unveiling was done by the President of the Republic of Mauritius.

The 1.5 m glass engraving of the Ishango bone will be on permanent display at the secretariat of the African Academy of Sciences in Nairobi, Kenya. The AAS hopes that this ancient bone-tool which places the cradle of mathematics in the heart of the African continent will be a source of pride, confidence and inspiration for African youth. This "homecoming" of the replica of the bone-tool would not have been possible without the financial and logistical support of IOCD's Executive Director, Prof Alain Krief of the University of Namur (Belgium), AAS Fellow and DST Nano-science Chair, Prof Maalik Maaza of UNISA and the Royal museum of Natural Sciences in Brussels and the ICTP.

The launch of AESA has been hailed and welcomed by many organization, but notably by the Government of Kenya, as was evident in the speech made by HE Cabinet Secretary Prof Jacob Kaimenyi who stated that Kenya is proud to host the African Academy of Sciences and is looking into ways of upgrading the hosting agreement between the government of Kenya and AAS and also contribute to the Academy's endowment Fund.

Prof Berhanu Abegaz, Executive Director, AAS

The launch of AESA ushers in a whole range of responsibilities for AAS, its Fellows and partners. This is a call to all of us, particularly, Fellows of AAS, to rise to the occasion to deliver on the Academy's mission and objectives.

I want to take this opportunity to thank all my staff at the AAS Secretariat for the incredible effort that each one of them made to make the launch a success. I also want to sincerely thank the partners, colleagues and other friends who helped us during the preceding weeks prior and during the launch.

The launch of AESA ushers in a whole range of responsibilities for AAS, its Fellows and partners. This is a call to all of us, particularly, Fellows of AAS, to rise to the occasion to deliver on the Academy's mission and objectives.

—Berhanu Abegaz

AAS and partners launch AESA

The African Academy of Sciences and the New Partnership for Africa's Development (NEPAD) Agency on 10 September launched a new initiative to fund research and develop science strategies in an event attended by Mauritian president, Her Excellency Dr Ameenah Gurib-Fakim, policymakers and researchers from across the globe.

The AAS and the NEPAD Agency launched the Alliance for Accelerating Excellence in Science in Africa (AESA) in Nairobi, Kenya, in partnership with the Wellcome Trust, the UK Department for International Development (DFID) and the Bill & Melinda Gates Foundation. The three funders have provided US$5.5 m in initial seed funding for AESA.

The AESA launch ceremony also featured the announcement of two grant programmes for supporting research in Africa: the Developing Excellence in Leadership, Training and Science (DELTAS) Africa awards and the Grand Challenges Africa initiative.

Dr Thomas Kariuki, Director of AESA speaks about the objectives of AESA at the launch. Tom expressed his delight to lead this new initiative

"Our task today is to look forward and address the large gap in research capacity that still exists between Africa and the rest of the world in all scientific disciplines, especially, in the physical sciences, technology, engineering, and mathematics (STEM) sector," said President Gurib-Fakim who was the chief guest of honour at the event.

The African Union- endorsed AESA will support the training and retention of Africa's scientists in an effort to improve the continent's science output, Tom Kariuki, the Director for AESA said.

Although there has been an increase in sub-Saharan Africa's share of global research from 0.44 percent to 0.72 percent, the region only accounts for 1 percent of the global research output.

The Alliance for Accelerating Excellence in Sciences in Africa (AESA) will contribute to alleviating the human resources

Prof Aderemi Kuku, President of AAS delivers his message at the Launch of AESA in Nairobi, Kenya

shortage by supporting the training of scientists and creating science leaders to set and shape the agenda for science development in Africa. This is a very important task the African Academy of Sciences feels responsible for.

It is not enough to train scientists for the continent but also develop leaders among Africa's scientists who will drive the science agenda for development in Africa.

AESA will also contribute to the AAS' role as a think tank for the African continent. At birth, it is already involved in developing the Africa health research strategy under the leadership of the NEPAD Agency.

AESA will seek to play a major role in setting the science agenda for the African continent.

Her Excellency Dr Ameenah Gurib-Fakim (first from right) addresses the media in a pre-launch event. To her right is Prof Aggrey Ambali of NEPAD, followed by Dr Tom Kariuki, Director of AESA.

AAS and partners launch AESA

Africa's Ministers of Health tasked the NEPAD Agency to develop the continent's health research agenda at the African Union Specialised Technical Committee on Health, Population and Drug Control in April 2015.

One of the first programmes that AESA will be managing is the Developing Excellence in Leadership, Training and Science (DELTAS). DELTAS-Africa aims to support the African-led development of internationally competitive researchers working across sub-Saharan Africa, headed by world-class leaders.

The Wellcome Trust-supported DELTAS initiative is one of the programmes that will be transferred to AESA in a move to shift the centre of gravity to Africa. This is believed to be the first of many decisions that will be made by funding agencies to shift the designing and management of research funding programmes to Africa. With this shift, "Funding decisions on Africa will be made in Nairobi not London," said Kevin Moses, the Wellcome Trust's Director of Science.

The AESA launch also saw the announcement of Grand Challenges Africa, a programme targeted at addressing Africa's developmental challenges. This program joins others within the Grand Challenges family of grant programs supported by the Gates Foundation and its partners.

Grand Challenges Africa will build on the global success of Grand Challenges programs in India, Brazil and South Africa, as well as the strong base of Africa Grand Challenges grantees funded by the Bill & Melinda Gates Foundation, Grand Challenges Canada and USAID. Grand Challenges Africa will initially support existing Grand Challenges grantees in Africa and over time will run Grand Challenges calls.

The launch began with a media breakfast at Nairobi's Serena hotel attended by 70 journalists and representatives from the AAS, the NEPAD Agency, Wellcome Trust, DFID and the Bill & Melinda Gates Foundation.

A Scientific Programme Meeting on the topic, *The future of Africa's R&D*, followed after the media breakfast at Villa Rosa Kempinski hotel. The day event ended with a launch ceremony that unveiled the Ishango bone, a 22,000 year old animal bone discovered in Ishango in the Democratic Republic of the Congo, and believed to indicate the early use of mathematics on the continent.

The event was very well attended by people from all over the world. Guests included AAS Fellows, Early Career African Researchers from all over Africa, representatives from the business community, the media from all over Africa, research organisations, the British High Commissioner to Kenya Christian Turner, Martial De-Paul Ikounga, the AU Commissioner for Human Resources, Science and Technology and Kenya's Cabinet Secretary for Education, Science Technology Jacob Kaimenyi.

HE Martial DePaul Ikounga, Commissioner for Human Resources, Science and Technology of the African Union Commission (AUC) speaks at AESA launch

Dignitaries at the Launch of AESA. From left: AAS President, Belgium Ambassador to Kenya, UK High Commissioner to Kenya, Kenya's Cabinet Secretary for Education, Science and Technology

Dr Kevin Moses of Wellcome Trust announces the DELTAS programme at the launch of AESA

Mauritian president urges African

The crucial importance of science and technology, and more importantly, the need for the continent to commit itself to boosting excellence in science and technology for achieving sustained long-term development cannot be over-emphasised.

Throughout history, science and technology has been instrumental in improving the human condition. That role will not diminish, although nations will have to be adept and innovative to bend Science and Technology (S&T) for development purposes and social advance.

When we talk about leveraging science and technology for development, we cannot be oblivious of the need to mobilise adequate funding in science and technology research.

Let me quote Dr Kwame Nkrumah, a great African Leader, Statesman and Pan-Africanist, who said in 1963 and I quote:

"We shall accumulate machinery and establish steel works, iron foundaries and factories; we shall link the various states of our continent with communications; we shall astound the world with our hydroelectric power; we shall drain marshes and swamps, clear infested areas, feed the undernourished and rid our people of parasites and disease. It is within the possibility of science and technology to make even the Sahara bloom into a vast field with verdant vegetation for agricultural and industrial developments".

That visionary statement made by the founding father of Ghana has been best captured in the Lagos Consolidated Plan of Action in 1980 which serves as a guidepost for charting Africa's development.

Looking back, Africa (and I mean sub-Suharan Africa) has taken significant strides in establishing networks of excellence, launching African Union competitive grants; supporting capacity development; improving the policy environment conducive for Science and Technology (S&T) and last but not least building innovation mechanisms to spur innovation and change.

Her Excellency Ameenah Gurib-Fakim, President of The Republic of Mauritius

Nonetheless, the results can best be described as a 'work in progress'. Some of the major challenges faced are excessive reliance on external financial support that has tended to target short-term activities and solutions.

In other areas, there has been limited scope for engaging African scientists and rallying them to promote sustainable development.

And finally, the Africa's Science and Technology Consolidated Plan of Action (CPA) had insufficient linkages to other continental frameworks and science and technology strategies.

Our task today is to look forward and address the large gap in research capacity that still exists between Africa and the rest of the world in all scientific disciplines, especially, in the physical sciences, technology, engineering, and mathematics (STEM) sector.

In Africa itself, research is mostly dominated by five nations: Egypt, Algeria, Nigeria, Kenya, and South Africa.

It is no surprise that four of these countries are also leading in terms of their gross domestic product (Nigeria, South Africa, Egypt and Algeria).

A World Bank report examined the research enterprise in Africa over a decade from 2003 to 2012 and compared it to that Malaysia and Vietnam.

These two countries had a comparable research base to the SSA regions at the beginning of the period of analysis.

It is interesting to observe that over the period 2003-2012, all three SSA regions had doubled their yearly research output and had greatly increased both the quantity and quality of research.

Indeed, SSA's share of global research has increased from 0.44% to 0.72% during the decade examined.

Nonetheless, a yawing gap in research capacity still exists between SSA and the rest of the world as the region only accounts for less than 1% of the world's research output while being home to 12% of the global population.

It is time to tackle mediocrity in S & T and forge the next generation of partnerships that can deliver results and lasting outcomes. Improving higher education is key to making Africa a knowledge-driven continent.

Despite the regions' strong growth, countries with comparable levels of research output in 2003 grew even faster over the same period i.e Malaysia at 35 percent and Vietnam at 18 percent.

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governments to fund science

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Upon closer analysis, it was observed that SSA's growth has overwhelmingly been driven by advances in Health Sciences research (approximately 4 percent annual growth rate), which now accounts for 45 percent of all SSA research.

Clearly, for SSA countries, renewed attention to Science, Technology, Engineering, and Mathematics (STEM) should become a strategic priority. Research in the Physical Sciences and STEM makes up only 29% of all research in SSA.

In contrast, STEM constitutes the largest share of Malaysia and Vietnam's total output (an average of 68 percent). Currently, SSA, especially East Africa and Southern Africa, rely heavily on international collaboration and visiting faculty for its research output. This must change!

There is also very little regional collaboration among African countries, hence need to increase Africa-Africa as well as South-South collaboration. This is a scenario that needs to be addressed as it calls for more government engagement and increased public funding of S&T research.

If Africa is to fully realise the S&T revolution, then governments should take the lead in both policy formulation and implementation to mobilize science and technology for sustainable development.

We are, unfortunately, very far from the target set by the Lagos Plan of Action and African Union 2007 initiative calling on African countries to allocate one percent of their GDP to science. As of today, only Tunisia and South Africa have met or are on track for meeting that target.

With the combined GDP of Africa coming close to US$ 2.6 trillion, the amount that could potentially be allocated for science is ca US$ 200 billion.

African countries can no longer depend only on external financiers to fund basic and strategic research on the continent. Greater public support is needed so that the fruits of research and S & T collaboration can help advance sustainable development on the African continent.

African Governments as well as the private sector should make the firm commitment to invest in Science, Technology and innovation, particularly if the continent wants to participate actively in the global knowledge economy and cultivate local science and technology capacity including the full participation of women. As you can appreciate, this latter aspect of the agenda is very close to my heart.

Our collective challenge is to reduce brain drain, promote circulation and accelerate brain gain because about one-third of qualified scientists and engineers who were born and trained in developing countries moved to industrialized countries. Ten percent (10%) of the total S&T workforce in the United States is of foreign origin, while in Australia the figure is as high as 25 percent.

I remain convinced that high-level research network, adequate infrastructure facilities and a better integration of basic science and technology within public and private sectors in Africa would also contribute to attracting Africans back to their home countries.

Because science is a social enterprise and thrives on collaboration. Such movement would also help to attract African scientists from around the world to work in the Continent and address its challenges.

I am pleased to report that in Mauritius, the private sector has taken the lead by creating a Bio-Park and is pushing for the creation of other techno-parks with a view to promoting the strategic emerging sectors such as ICT, biotechnology, plant-based pharmaceuticals and other allied industries for greater job creation. Institutions that have led to the genesis of the Bio-Park and the Cybercity have existed for the past 10 years and have capitalized on our strengths – our people and our biodiversity.

The Government has also pledged around 50M US$ to provide seed support for setting up the appropriate infrastructure in the public sector while promoting public private partnerships that play to our strengths.

A tax holiday of 10 years has also been provided for in the 2015 Budget to attract talented Mauritian diaspora. At the Continental level, I commend the initiative by DFID, the Wellcome Trust, the UK Department for Inter-national Development and the Bill & Melinda Gates Foundation for pioneering innovative approaches that are empowering the African scientific research community.

These efforts will be further amplified because they chose to work with the African Academy of Sciences which is bringing together the best brains of the Continent including the diaspora for a collective push to vastly boost S&T capacity.

This exemplary partnership no doubt bodes well for the future. I have covered a large canvas and would like to close by making an appeal for greater S&T education and collaboration and investments.

Such interventions and investments will not only help to build African capacities but also have the beneficial spillover effect of bringing to bear the benefits of modern science to more frontally tackle Africa's development challenges.

Our time is to act is now!

From a speech delivered by Mauritian president Her Excellency Dr Ameenah Gurib-Fakim at the launch of the Alliance for Accelerating Excellence in Science in Africa (AESA) in Nairobi, Kenya. HE Dr Ameenah Gurib-Fakim is a fellow of the African Academy of Sciences.

AESA Launch in Pictures

HE Dr Ameenah Gurib-Fakim at the media breakfast prior to the launch of AESA. She is flanked by Aggrey Ambali of NEPAD and Berhanu Abegaz, Executive Director of AAS

Julia Kemp, Head, DFID East Africa Research Hub. Speaks at the media breakfast of AESA launch. DFID is a funding partner of AESA

Executive Director of AAS, Berhanu Abegaz, speaks at the AESA Media launch. The AAS is very pleased to have reached this stage with the launch of AESA. The academy will continue to work closely with NEPAD and the founding partners to bring more partners on board.

HE Martial DePaul Ikounga, Commissioner for Human Resources Science and Technology (HRST) of the African Union Commission made an emotional speech at the launch of AESA. He expressed hope that Africa is on the right path and the AUC will continue to work closely with the AAS

Group picture at the end of the DELTAS programme inception meeting. This meeting was held as one of the events of the launching of AESA. It was attended by research teams of the winning projects that were announced at launch

HE Jacob Kairmenyi, Cabinet Secretary for Education Science and Technology (right) making a point to Christin Turner (British HC to Kenya), Mrs Roxane de Bilderling (Beligium Ambassador to Kenya) and Prof Kuku (AAS President)

AESA Launch in Pictures

HE Dr Ameenah Gurib-Fakim poses for the cameras with the Belgium Ambassador to Kenya, Mrs Roxane de Bilderling (Belgium) and Mr Michele Mbare of Congo. This was after the unveiling of the Ishango bone

HE Dr Ameenah Gurib-Fakim takes a picture with female staff of AAS, NEPAD and other female delegates at the DELTAS inception meeting. She is a real motivation and inspiration to ladies all over Africa.

"Homecoming" of the replica of Ishango bone was made possible with the financial and logistical support of IOCD's Exec Director, Prof Alain Krief of the University of Namur, Belgium (2nd from left), and AAS Fellow and DST Nano-science Chair, Prof Maalik Maaza of UNISA (2nd from right)

AAS President, Aderemi Kuku, speaking at the launch of AESA

Delegates at the launch of AESA. In this picture are Kevin Moses of Wellcome Trust, Kevin Marsh of AAS, and Haddis Tadesse, the country representative for Ethiopia and the representative to the African Union for the Bill & Melinda Gates Foundation

Section of delegates at the launch of AESA. Delegates were from the African Union Commission, NEPAD, academia, industry and the business community, the diplomatic corp, government officials from Kenya, AAS Fellows, media and development partners.

AAS President's message at Launch of AESA, 10 September 2015

It is my great honor and privilege to welcome all of you to this auspicious and historical occasion of launching AESA and two programs - DELTAS (Developing Excellence, Leadership, Training and Science) and GCA (Grand challenges Africa). AESA is a Pan-African Platform at first for Health Research created by AAS and NEPAD with the financial support of Bill and Melinda Gates Foundation, Wellcome Trust and UK-DfID (Department for International Development).

During a rather long telephone conversation I had with Dr. Kedest Tesfagioris of the Bill and Melinda Gates foundation last year July, she told me that the idea of putting together a pan-African organization that can take up scientific mentorship and grant giving came up during her discussion two years ago with Professor Ambali of NEPAD. They had thought about how to get suitable partner to link with funders to lay the ground work, find suitable scientists, give grants etc. The AAS readily came to mind and during my discussion with her, she also informed me that USAID, Wellcome trust and Prof Abdalla Saar from Grand Alliance Canada were receptive to the idea of having a Grand alliance Africa. I am very delighted that Grand Alliance Africa is now a reality and is also being launched today.

Around the time of my conversation with Dr. Tesfagioris, Professor Kevin Marsh was already in deep discussion with the African Academy of Sciences about establishing a platform that would be based at AAS and would include funders, Scientists based from Africa and abroad etc. It was a very exciting time for us at the AAS Governing Council receiving reports from Professor Marsh and the AAS members of his team—Prof Abegaz (ED) and Dr Kariuki (then Treasurer). I remember that on one occasion, Professor Marsh personally gave a progress report to the AAS Governing Council meeting in Nairobi last year July.

I am happy to report that so much progress was made in later months that our AAS Governing Council was able approve the AESA charter during our meeting in February 2015. So, here we are today, Launching AESA. We are all so happy and delighted. The appointment of Prof Marsh as a Senior Adviser and Dr. Kariuki as AESA Director has placed AESA on a firm footing. I feel confident that AESA will more than fulfil its mandate; to foster longstanding sustainable development of research capabilities and promotion of scientific excellence through open calls for proposals with transparent review process ,actively manage grants, as well as evaluate and measure the impact of such investments.

AAS is indeed the correct, unique, and appropriate Pan-African organization to host AESA platform for several reasons.

1. AAS has about 300 members from 42 countries in all areas of Science and technology including economics and social sciences well as quite a number of associate fellows from other parts of the world. As such, AAS has a lot of expertise in Africa and beyond.
2. Many Fellows of AAS are also fellows of their National Academies and so are influential scientifically in their countries .
3. AAS has a wide network of individuals and scientific Institutions to which AESA has access.
4. AAS is a strategic partner to the African Union, Africa Union Commission, NEPAD, etc. Indeed, the 24th summit of AU on Jan 30-31 2015 called on member states and global partners to support AESA.
5. AAS has five sub-regional offices --- Burkina Faso, Egypt, Cameroon, south Africa, and Tanzania that can be effectively used to the advantage of AESA.

It is now my pleasant duty, on behalf of AAS, to thank all those who have contributed in one way or the other for the actualization of the AESA platform.

I thank the funders notably, Bill and Melinda Gates Foundation, Wellcome trust, DfID. I also thank NEPAD not only for being part of the initiation of ideas leading to the platform but for supporting it financially in a substantial way. I thank Prof Mash and his team for their untiring effort as well as the AAS secretariat for their hard work.

Finally, I thank you all for honoring this historic occasion with your presence.

Editor's note:

From 2014 when AAS Executive Director, Prof Berhanu Abegaz, and then Treasurer, Dr Tom Kariuki, presented to the AAS Management Committee (MC) discussions held with Prof Kevin Marsh on the AESA concept and eventual appointment of Prof Marsh as Scientific Advisor at AAS till launch of AESA in 2015, there has been great effort under the effective coordination of Prof Abegaz which has brought this dream to reality. This is yet another evidence that with handwork, clear focus, commitment, development of science in Africa will proceed well.

About Grand Challenges Africa, Haddis Tadese, BMGF representative in Ethiopia

Grand Challenges is a family of initiatives fostering innovation to solve key global health and development problems. These initiatives use challenges to focus attention and effort on specific problems, and they can be traced back to the mathematician David Hilbert, who over a century ago defined a set of unsolved problems to spark progress in the field of mathematics.

In 2003, the Bill & Melinda Gates Foundation launched Grand Challenges in Global Health, which came to include multiple funding partners. This initiative focused on 14 major scientific challenges that, if solved, could lead to key advances in preventing, treating, and curing diseases of the developing world. Seeking to engage the world's most creative minds, Grand Challenges in Global Health awarded 44 grants totaling over $450 million for research projects involving scientists in 33 countries.

Haddis Tadesse, the country representative for Ethiopia and the representative to the African Union for the Bill & Melinda Gates Foundation announced the Grand Challenges Africa initiative at the launch of the Alliance for Accelerating Excellence in Science in Africa (AESA).

The scheme, which will be led by AESA, an initiative of the African Academy of Sciences, will initially support the 400 existing Grand Challenges grantees in Africa. It will convene a meeting or the grantees in 2016.

Grand Challenges Africa will ultimately develop, launch and manage Africa-specific Grand Challenges targeted at the development challenges facing African countries.

Grand Challenges Africa will build on the success of the Grand Challenges Initiative, which was set up to fund innovators from across the globe to find solutions to the most pressing health and development challenges.

The initiative has programmes in Brazil, India and South Africa.

Messages at the launch of AESA

Aggrey Ambali, Head of NEPAD Science and Technology Innovation Hub (NSTIH)

The Ebola outbreak has demonstrated the fragility of our health system and the need to re-emphasise disease detection, surveillance and control. Africa needs to develop and implement strategies that will assist AU Member States to meet the core capacity demand in dealing with existing as well as emerging health challenges.

It is for this reason that in January 2015, the African Union Heads of State and Government directed the NEPAD Agency in partnership with the African Academy of Sciences to establish the Alliance for Accelerating Excellence in Science in Africa (AESA).

AESA aims to inspire and train the next generation of African public health and development leaders that will drive the continent's research and development agenda. It will stimulate breakthrough innovations in health that will impact the lives of African people.

The NEPAD Agency is pleased to work with AAS to operationalise the decision of African Heads of State and Government.

In the spirit of NEPAD which is about building partnerships, the NEPAD Agency and AAS have partnered with the Bill and Melinda Gates Foundation, the UK Department of International Development (DfID) and the Wellcome Trust in the implementation of the AU Summit decision on AESA. All these institutions have committed financial, technical and other material resources in order to get us to where we are today and moving forward. While other partners will be communicating on their contributions, the NEPAD Agency has committed an initial half a million US$ to support the development of the AESA platform.

I thank all the AESA partners and we at the NEPAD Agency look forward to working with them.

Simon Kay, Head, International Operations at the Wellcome Trust

The Wellcome Trust is a long-term partner to African science. Sir Henry Wellcome, our founder and benefactor established the Wellcome Trust Tropical Laboratory in Sudan in 1902. Our commitment has grown to today's current investment of $333m US dollars.

Today we are announcing 7 awards to African research leaders. Via DELTAS Africa, WT and DFID bring world-class research capacity to African universities with a strong focus on creating training opportunities for the next generation of researchers. Our vision is to create a large cohort of internationally competitive researchers.

The awards allow research to be carried out where the health challenges are the greatest. DELTAS Africa awardees are receiving more than US$70 million over an initial period of five years. The DELTAS Africa awards will mean that African institutions will have greater ownership of training scientists and researchers, often in countries where becoming a scientist is not a recognised career path.

We are shifting the centre of gravity for leading and managing African science to Africa. By next year the DELTAS awards will be managed by AESA. We are clear what success in the long-term (15 to 20 years) will look like:

- Researchers trained through the Wellcome Trust independently win funding (and we hope it is from the Wellcome Trust!);
- That the outputs of research are translated into health policy that improves lives;
- That African governments, institutions and individuals will take a greater stake in funding and supporting African science.

Christian Turner, British High Commissioner to Kenya

The science community represented here knows that science is important for developing new technologies and products; it helps us in identifying better and more cost effective ways of delivering development; and improving our understanding of challenges and problems for better decision making. But how do we convey this impact to policy makers in Africa?

These are exciting times for science and innovation in Africa. Governments across the continent recognise that science, technology and innovation are key to economic growth. The African Union has set out an ambitious 10-year strategy on Science, Technology and Innovation. We know from evidence from the UK and other countries that public expenditure on science and engineering research is an investment that generates economic growth. Public investment in science also attracts private investment.

I am delighted to join you today to announce UK's partnership in AESA, the Accelerating Excellence in Science in Africa platform. We strongly commend NEPAD's leadership with the African Academy of Sciences in bringing this new platform together. It is a pleasure to stand here with colleagues from the Bill and Melinda Gates Foundation and the Wellcome Trust as we join our support for this initiative.

Today the UK is also committing £6.25 million (1 billion Ksh) to join Wellcome Trust in the DELTAS initiative. This new UK support for AESA, the DELTAS programme and our wider initiatives including the support we will announce tomorrow to Africa's research councils underline UK's commitment to be a strong partner to Africa on science.

These programmes will help to ensure that science for Africa is led by Africa's researchers, from Africa.

A replica of 22,000 year old Ishango bone unveiled

HE Dr Ameenah Gurib-Fakim univeils the Ishango bone replica at the launch of AESA

AAS on 10 September 2015 unveiled an enlarged replica of the Ishango bone, a 22,000 year old animal bone discovered in Ishango in the Democratic Republic of the Congo, and believed to indicate the early use of mathematics on the continent. Mauritian president and AAS Fellow Ameenah Gurib-Fakim unveiled the replica glass monolith at the launch of the AESA in Nairobi, Kenya.

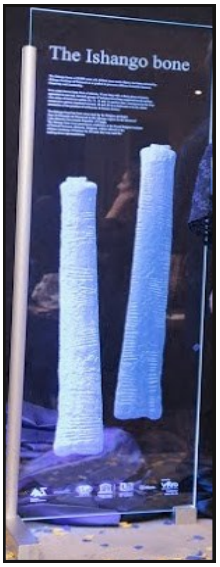
"The Ishango bone is evidence of the existence of science on the continent in prehistoric era. It also served to show how science was used to serve the communities. Current generations must build upon this foundation from our ancestors to use research to meet the needs of the continent," said Prof Gurib-Fakim.

The 150 cm 2D replica was etched by a laser beam with its sub-surface engraved with the words, Ishango bone. The AAS, the University of South Africa, the International Centre for Theoretical Physics, Belgium based International Organization for Chemistry in Development (IOCD) and the Museum of Natural Sciences collaborated to facilitate the creation of the replica. AAS has also received 3D replicas of the bone, which are 30 cm long.

Berhanu Abegaz, the Executive Director of the Academy the Ishango bone, "set a precedent for the civilisations that followed such as the pyramids in Egypt. It's a testimony of Africa's potential that exists in current and future scientists."

Prof Kuku, Prof Kaimenyi and HE Martial Ikounga applaud the unveiling of Ishango bone replica

The 2D replica will be positioned in front of the Academy's building to serve as a reminder



of Africa's continuing legacy in developing science.

Malik Maaza, the UNESCO UNISA Africa chair in nanoscience and nanotechnology said the replica was laser engraved in recognition of 2015 being the International Year of Light.

Belgian archeologist Jean de Heinzelin de Braucourt discovered the Ishango bone along the Semaliki river in 1957. The bone is believed to be that of a baboon. There are two such objects –which are 10 cm and 14 cm, respectively, discovered in the same area in consecutive years. Both have handmade tally marks that have been interpreted as a prehistoric calculator, lunar calendar or barcode. The smallest of the bones was the first to be discovered and exhibited at the Royal Belgian Institute of Natural Sciences in Brussels where both now reside.

"Selection of the Ishango bone by AAS as a symbol should boost interest in science and scientific creativity and push the Africans to stand up and work in the spirit of their ancestors," said Alain Krief, Executive Director at the IOCD.

The University of Namur has created a video to mark the unveiling of the Ishango bone, which can be found here: website http://www.ishbone.be/images/video_1.mp4

Back to Africa

Africa is well known for its beautiful landscapes and wildlife. But not for its scientific achievements. Yet, four scientists originating from Africa were awarded the Nobel Prize, three in medicine (the South African-American physiologist and physicist Max Theiler and Allan Cormack who won the prize in 1951 for the vaccine against the yellow fever and in 1979 for x-ray computed tomography, respectively, and Sydney Brenner in 2002 for his contribution to the work on the genetic code). The fourth science laureate was Egyptian-American Ahmed Zewail in 1999 for his contribution to femto-chemistry.

The science drive for the 'Rising' Continent is fostered by the African Academy of Sciences (AAS), a merit-based academy established in 1985. The Ishango bone is a symbol of the scientific excellence that AAS and its partners seek to nurture and promote through the Alliance for Accelerating Excellence in Science in Africa (AESA). The launch of AESA and the unveiling of the replica of the Ishango bone will always inspire confidence that the continent will duplicate past generations' success in nurturing its best talent through programmes like AESA. Ishango reflects Africa's scientific heritage in the past and in the future.

There are two such objects, the first of which is about 10 cm length and was made of animal bones some 22,000 year ago. The second bone is 14 cm. Hand-made tally marks were carved on both objects. These strange scratches are grouped in a few sets running the length of the bone and have been the subject of much research and speculation. Some consensus is in favour of numeral representation in mathematics. The first bone was found in 1957 by the Belgian archaeologist Jean de Heinzelin de Braucourt in Ishango, an area close to Lake Edward, which borders the Democratic of the Republic of Congo and Uganda. The second bone was excavated from the same archaeological site two years later. Both are exhibited at the Royal Belgian Institute of Natural Sciences in Brussels.

The AAS, University of South Africa, International Centre for Theoretical Physics and Belgium's University of Namur created the crystal glass replica of the Ishango bone with the support of the International Organization for Chemistry in Development.

The 2D replica glass monolith, which is 150cm high was etched by a laser beam with its sub-surface engraved with the words Ishango bone. The use of a laser for its fabrication alludes to the "International Year of Light and Light-based Technologies", the United Nations observance of the year 2015.

The Ishango bone is coming back to Africa 58 years after its discovery. Its position in front of the central building of the AAS, the enlarged bone replica serves to promote both science and education.

The Ishango bone is a symbol to inspire African scientists and students with a feeling of pride of belonging to the continent where such early use was made of mathematics. Ishango, a symbol of Africa's scientific excellence in the past and future.

Winners of DELTAS awards announced

Seven African scientists have won grants from an initiative supporting collaborative teams to conduct health research, offer training fellowships and mentorship, and invest in research infrastructure. The seven, will share £46 m from the Developing Excellence in Leadership, Training and Science (DELTAS) Africa scheme. DELTAS is funded by the Wellcome Trust and the UK Department for International Development, which have committed to hand over the management of the initiative to AESA. "We are supporting AESA and by so doing we are shifting the centre of gravity for leading and managing African science to Africa. By next year the DELTAS awards will be managed by AESA," said Simon Kay, the Wellcome Trust's Head of International Operations, told journalists and guests at a media breakfast hosted as part of a series of events to launch AESA.

The winners, whose projects will tackle health challenges including malaria, tuberculosis and mental health, are:

Dr Gordon Awandare:

From University of Ghana has been given £5.1 million to expand the remit of a programme led by the West African Centre for Cell Biology of Infectious Pathogens to offer postdoctoral training in pathogen biology and human genetics. The programme currently offers masters and PhD training.

Dr Dixon Chibanda:

From the University of Zimbabwe received £4.1 million for the African Mental Health Research Initiative. The initiative will train a cohort of mental health researchers in sub-Saharan Africa to bridge the shortage that has seen countries like Zimbabwe having only 11 psychiatrists. The researchers will be trained to understand the burden of mental health within populations, as well as risk factors such as poverty and HIV.

Prof Tobias F Chirwa:

From South Africa's University of Witwatersrand received a grant is worth £3.5 million. The award is for the network for Sub-Saharan Africa Advanced Training Programme for Leadership and Excellence in Biostatistics, which train masters and PhD students across Africa in biostatistics.

Prof Abdoulaye Djimde:

From the University of Science Techniques and Technologies of Bamako in Mali was awarded £5.5 million for Developing Excellence in Leadership and Genetic Training for Malaria Elimination in Sub-Saharan Africa (DELGEME). His initiative will focus on training malaria researchers.

Prof Alison Elliott:

From Uganda Virus Research Institute received £4.6 million for the Makerere University UVRI Centre of Excellence for Infection & Immunity Research and Training (MUII-plus). The initiative will offer fellowships for training African research leaders in bioinformatics, immunity and infectious diseases

Dr Samson M Kinyanjui:

From KEMRI-Wellcome Trust Research Programme, Kenya received £8 million for the Initiative to Develop African Research Leaders (IDeAL). IDeAL is a programme train and develop outstanding young African scientists into world-class research leaders.

Prof Thumbi Ndung'u:

From KwaZulu-Natal Research Institute for Tuberculosis and HIV, South Africa, was awarded £7.3 million for the Sub-Saharan African Network for TB/HIV research Excellence. The network will expand basic, clinical and translational research programmes focused on HIV and TB. HIV and TB disproportionately affect sub-Saharan Africa.

The African Academy of Sciences congratulates and celebrates the seven winners and wishes all these programmes resounding success. There are many equally good programmes that did not receive funding and the Academy hopes that there will be more funding for these programmes.

AAS, through its newsletter "Science*Policy*Africa" will follow the work of these programmes and share with its readers and the global science community the successes that these programmes will achieve.

1st AAS PAN-AFRICAN SCIENCE OLYMPIAD (PASO)

The AAS Commission on Pan-African Science Olympiad (PASO) was created by the AAS Governing Council in 2014. I feel very delighted to report that the AAS PASO place actually took place August 23-28, 2015 in Abuja, Nigeria--thanks to the Nigerian Federal Ministry of Education and the National Mathematical Centre, (NMC) Abuja which served as Hosts for the Olympiads without involving AAS in any financial cost.

Prof Kuku speaking at the 1st AAS PAN-AFRICAN SCIENCE OLYMPIAD (PASO)

Soon after Nigeria agreed to host the Olympiads, the Nigerian Federal Ministry of Education at the instance of Professor A. R. T Solarin, the Director of the National Mathematical Centre decided to set up a Ministerial National committee with members drawn from several other Federal Ministries --Science and Technology, Foreign Affairs, Internal affairs, Communications Technology etc with various subcommittees--Security, Finance, Publicity, Technical and Awards etc.. each of them facilitating the implementation of the various activities connected with the Olympiads. The Olympiads was attended by the President of AAS who commended the hard work for the committee and its Subcommittees to be able to actualize the Olympiads.

Prof Solarin with AAS PASO team from Ghana

Prof Kuku presenting the AAS PASO trophy to the leader of the winning country, Nigeria

Participating countries were Nigeria, Benin Republic, Burkina Faso, Ghana, Mali. Niger Republic, South Africa and Tanzania. Nigeria came first overall and got the winner's trophy. Burkina Faso placed second and Ghana came third; both countries received plaques for their effort. Medals were also given to first, second and third contestants in addition to medals and certificates. Nigeria got gold, silver and bronze medals, Burkina Faso got silver and bronze, Ghana got silver and bronze medals, South Africa bronze medals and Tanzania bronze medals.

The AAS President spoke at both opening and closing ceremonies. Some of the cardinal aims of the AAS -PASO were achieved, including

1) stimulating and developing the interest of African Youths in solving scientific problems,
2) promoting positive interactions and healthy competition among African Youths thus furthering African unity through sciences.

It is hoped that this first AAS PASO will open the way for more in future and that there will be many more participating countries. AAS appeals to other African countries to come forward and host forthcoming AAS PASOs.

It is now our great pleasure to thank most heartily those who have contributed to make this happen ---The Nigeria Federal Ministry of Education, Prof A. R. T. Solarin, and all who served on the National Ministerial committee and subcommittees, the Secretariat and members of the NMC, and those who helped in cash and kind, corporately and individually towards the success of the Olympiads.

This is a report is by: Prof Nobert Hounkonnou, Chairman, AAS Commission on Pan-African Science Olympiad.

1st AAS-KAST Symposium

AAS and the Korean Academy of Science and Technology (KAST) held a joint symposium on 6 to 7 July 2015 at the AAS offices in Nairobi, Kenya on the theme: "Recent advances in bio-sciences and bio-technology for socio-economic development." Over 40 delegates attended the event, which included speakers from the two academies. President Sung Hyun Park and Aderemi Kuku of KAST and AAS, respectively, opened the symposium by encouraging increased collaboration between the two academies.

The speakers and their topics were:

1. Abdisalan Noor, AAS: *Malaria control in Africa: Successes, challenges and opportunities*
2. Geoffrey Maloiy, AAS: *Energetics and biomechanics of locomotion in a large desert ungulate; the one-humped camel. (Camelus dromedarius)*
3. Thomas Kariuki, AAS: *Capacity building for bio-sciences in Africa: the AESA approach*
4. Sang-Soo KWAK, KAST: *Metabolic engineering of sweet potato pigment antioxidants in transgenic plants for sustainable development on global marginal lands*
5. Yong-Mahn Han, KAST: *Cellular modeling of human diseases using induced pluripotent stem cells*
6. Hee-Mock Oh, KAST: *A New Horizon of microalgal biotechnology for cyanobacterial bloom control and microalgal products simultaneously*
7. Yong-Koo Park, KAST: *Cancer genomics and personalised medicine*
8. Ermias Dagne: AAS: *Developing high value commodities from Africa's plant resources through product-focused research*
9. Yeong Shik Kim, KAST: *Anticancer and anti-inflammatory activities of Korean herbal medicine*

Some key messages from the event included:

- Global malaria investment increased from US$0.1 billion in 2000 to US$2 billion in 2013 but very little of the global investments came from African governments.
- Africa has problems that cut across nations yet there is little intra-Africa collaboration.
- Africa needs to build a critical mass of scientists by mentoring and defining career paths for young scientists to address the attrition of skills in Africa
- Genetic tests are laying the foundation for personalised medicine preventing adverse drug reactions.

A second joint AAS-KAST symposium is scheduled for 2016. This event will be hosted by the Korean Academy of Science and Technology.

Group picture of participants at the AAS-KAST symposium

NEWS

New Director at the International Foundation for Science (IFS)

Dr Nighisty Ghezae, Director, IFS

The Board of Trustees of IFS has announced the appointment of Dr Nighisty Ghezae as the new Director of IFS from October 1st 2015. Dr Ghezae will take over from Dr Graham Haylor, who has, inter alia, led the successful development, launch and implementation of a 10-year strategic plan 2011-20 for IFS. He is leaving to take up a new position in the UK.

Dr Ghezae has been Head of Programmes at IFS since 2007 and has held responsibilities for coordinating the programme of activities, helping develop strategy and policy, oversight of research areas, coordinating and evaluating supporting activities provided to the IFS constituency and supervising programme staff. Dr Ghezae has been deeply involved in the new strategic plan and its current implementation.

The direct handover will ensure a seamless transition in the third year of this innovative strategy involving IFS staff, grantees and partners.

Catherine Odora Hoppers wins two awards

Prof Catherine Odora Hoppers, Fellow of the African Academy of Sciences and incumbent of the Department of Science and Technology/National Research Foundation South African Research Chair in Development Education at the University of South Africa (UNISA) received the Nelson Mandela Distinguished Africanist Award on 3rd July 2015.

Prof Catherine Odora Hoppers

The award is given to an African who has distinguished himself or herself in the public leadership positions. Prof Hoppers' nomination for this award was informed by her dogged pursuit of the total liberation for the continent through the promotion of Indigenous Knowledge Systems of Education.

Former President of South Africa and also patron of the Thabo Mbeki Foundation, Mr Thabo Mbeki, presented the award on behalf of four major institutes of UNISA (the Archie Mafeje Institute, the Institute of Global Dialogue, the Institute for African Renaissance Studies and the Thabo Mbeki Leadership Institute), and the African Diaspora in general as the African Union's sixth province.

Prof Odora Hoppers also received the "Woman of the Year Award - 2015" from the UNISA Women's Forum (UWF) for the category 'Significant Achievements' on the 3rd August 2015.

Study finds genes that increase resistance to severe malaria

Prof Kevin Marsh

A study co-authored by AAS Senior Advisor Kevin Marsh has identified genes in children that increase resistance to sever malaria by 40%.

Marsh was part of the MalariaGen, an international network of scientists and clinicians in Africa, Asia and other malaria-endemic regions of the world that is largely funded by the Wellcome Trust, which published the study in the journal Nature on 30 September 2015.

After analysing the DNA of children from Burkina Faso, Cameroon, Ghana, Kenya, Malawi, Mali, Gambia and Tanzania with and without severe malaria, they found that the genes responsible for malaria resistance are located near a cluster of genes which code for proteins called glycophorins. Glycophorins are involved in malaria parasite's invasion of red blood cells.

A particularly strongly-protective variant of the gene was most commonly found among children in Kenya.

Ebola Virus Disease and HIV/AIDS – An African Assessment

Below are e-Links to opinions on EBOLA .contributed by Prof Felix I D Konotey-Ahulu, Kwegyir Aggrey Distinguished Professor of Human Genetics, University of Cape Coast, Ghana and Consultant Physician Genetic Counsellor in Sickle Cell and other Haemoglobinopathies www.konotey-ahulu.com;

- www.bmj.com/content/351/bmj.h4192/rr-0
- www.bmj.com/content/350/bmj.h2105/rr-7
- www.bmj.com/content/350/bmj.h2105/rr-5
- www.bmj.com/content/350/bmj.h2105/rr-6
- www.bmj.com/content/351/bmj.h4192/rr-1
- http://bit.ly/1EB71LS
- http://bit.ly/1oPFf42 www.bmj.com/content/349/bmj.g7558/rr

Consultative Meeting on Scientific Equipment Policy

From 20-21 August, 2015, AAS hosted a Consultative Meeting on Scientific Equipment Policy, one of the concluding activities in the current phase of a MacArthur Foundation-funded project the Academy has been jointly carrying out with long-standing partner, the International Foundation for Science (IFS, based in Stockholm).

Forty-two participants from academies of sciences and research institutes in Ethiopia, Ghana, Kenya and South Africa; NEPAD; Seeding Labs; UNESCO; and IFS alumni from six African countries attended the workshop. The gathering's purpose was to raise Pan-African awareness of how the identification and resolution of scientific equipment issues are critical for scientific development in Africa, and to identify national and regional channels to share learned experiences and to influence policy on scientific equipment.

Representatives from Ethiopia, Ghana and Kenya gave presentations about their respective countries' present efforts at policy change with regards to scientific equipment, effective approaches to advocacy, actors and roles in policy change advocacy, and recommendations to identify and engage with scientific equipment policy change channels.

IFS alumni spoke about their experiences as early-career scientists of a range of issues dealing with scientific equipment and policy advocacy, followed by a presentation on microscience, scientific equipment and policy approaches by Prof John Bradley of RADMASTE Centre in South Africa, and Prof James Cosentino of IOCD. From the day's presentations and deliberations came a spectrum of themes for more detailed discussion, of which participants settled on three to focus their energies: microscience, the impact of research on national development, and existing national and regional frameworks and bodies. From these came suggestions on channels of advocacy for policy change on scientific equipment and who needs to work together.

The meeting concluded with each participant making an informal commitment to take forward efforts at scientific equipment policy change. Prof Berhanu Abegaz said, "AAS will pursue an advocacy role to persuade governments and institutions to develop clearly articulated guidelines for the procurement, manufacture, installation, shared use, operation and maintenance of scientific equipment, including microscience equipment.

Dr Graham Haylor, Director of IFS also reaffirmed IFS' long-standing commitment to address scientific equipment issues as a contribution to the development of Africa's scientific endeavors.

Capacity Building in Cell Biology/Regenerative Medicine

The AAS in partnership with the Kenya National Academy of Sciences, the Indian Nation Science Academy, IAP - the Global Network of Science Academies and leading scientists in "*Cell Biology/ Regenerative Medicine*" (CB/RM) *from Africa, India, Brazil and China is giving a unique* young African scientists to develop their capacity.

Two workshops were held at AAS secretariat in Nairobi, Kenya, in 2013 and 2014 aimed at enabling young African scholars to learn from and initiate collaboration with distinguished experts in CB/RM.

Resource persons for this project and the workshops that have been held include Prof Dorairajan Balasubramanian from L. V. Prasad Eye Institute, India; Prof. José Garcia Abreu and Prof. Fabio Almeida Mendes from the Institute of Biomedical Sciences, Federal University of Rio de Janeiro, Brazil; Dr. Anjali Shiras from the National Centre for Cell Sciences, India; Prof. Omu Anzala, KAVI-Institute of Clinical Research at the University of Nairobi, Kenya; Prof. Susan H. Kidson, University of Cape Town, South Africa; Dr. Venant Tchokonte-Nana, Stellenbosch University, South Africa and Dr. Hiba BadrEldin Khalil Ahmed from Al Neelain University, Sudan.

Seven African early career researchers scholars were identified and facilitated for placement at specialized laboratories for short-term research visits in Brazil, India and South Africa. One who undertook her research visit at the Federal University of Rio de Janeiro, obtained a scholarship from the Brazilian Ministry of Education for a PhD in Anatomy and Pathology at the Federal University of Rio de Janeiro, School of Health Sciences. AAS has supported her with a one way ticket to Rio as her scholarship did not cover her travel.

AAS is exploring the possibility of a third CB/RM workshop in 2016 in collaboration with the Stellenbosch Institute for Advanced Study (STIAS). AAS intends to continue with this mentorship programme and welcomes further collaboration from interested partners.

By: Olivia Osula, Programme Assistant, AAS

Science*Policy*Africa

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