

RIS/AAGC Discussion Papers

# Health Sector Cooperation in Asia Africa Growth Corridor

Harpreet Sandhu

Discussion Paper # 215



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Core IV-B, Fourth Floor, India Habitat Centre  
Lodhi Road, New Delhi – 110 003 (India)

Tel: +91-11-2468 2177/2180; Fax: +91-11-2468 2173/74

Email: [dgoffice@ris.org.in](mailto:dgoffice@ris.org.in)

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# Health Sector Cooperation in Asia Africa Growth Corridor

– Harpreet Sandhu

## Key Recommendations

- At the time when emerging economies are increasingly moving away from Western funding models and looking to develop independent capacities, it is opportune time for the two regions of Africa and Asia to pool together resources for health innovation.
- In future, most of the diseases are likely to emerge from Africa or Asia, particularly zoonotic and vector-borne diseases and the diseases of concern could be Neglected Tropical Diseases. These regions are also experiencing epidemiological shift towards non-communicable diseases.
- India and Japan can join hands towards development and dissemination of interventions (including vaccines) for infectious pandemic diseases, which may seriously affect society.
- In line with India's National Health Policy 2017, health agenda of Agenda 2063 and Japan's "Resilient Health Systems for Quality of Life," India and Japan can work jointly to undertake effective measures against communicable and non-communicable diseases; attaining universal health coverage through resilient systems; strengthening emergency responses; and promoting R & D innovation and capacity building.
- African governments can take proactive steps for faster drug marketing approval for generic pharmaceuticals, speedier measures for various clearances for setting up new ventures in the pharmaceutical sector and in the healthcare sector.
- Primary hurdle facing developing nations on the road to excellence in the health sciences is the lack of capacity including medical and paramedical staff, scientist and researchers, technicians and equipment handlers, manufacturing and quality assurance staff and regulators. India, Japan and other countries in Asia and Africa can collaborate with each other in addressing this skill gaps.
- It is imperative to establish a functional and robust health surveillance and response mechanism enabling two-way exchange between laboratory and clinical researchers and public health workers.

# Health Sector Cooperation in Asia Africa Growth Corridor

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Harpreet Sandhu\*

**Abstract:** Asia and Africa being home to one-third of human population face the daunting challenge of meeting the demand for healthcare services, disease prevention and management. The burden of provision of healthcare services falls heavily and unequally for the countries in Asia and Africa. Population growth, faster mobility, urbanization and environmental changes like climate change and other factors increase the risk of faster global spread of infectious diseases. The role of international collaboration is critical for tackling the emerging challenges of various diseases. This paper highlights the existing health sector cooperation schemes of India and Japan in Africa in the AAGC framework. The potential areas of cooperation are biomedical and health research such as advanced capacity in genomics, proteomics and modern biology, establishment of public and private clinical services, and so on. India's strength in generic drugs, vaccine supply, open source drug discovery and development is vital for improving healthcare sector in African countries. Japan's targeted intervention in disease prevention and mitigation would contribute significantly to the provision of healthcare services in Africa. Entrepreneurship platforms, incubators, product development partnerships, early stage development R&D and similar innovative health strategies would lift the burden of diseases in Asia and Africa. India-Japan led cooperation initiatives in health sector in Africa under the Asia Africa Growth Corridor initiative would be central to the process.

**Keywords:** AAGC, infectious diseases, healthcare provision, drug development, R&D collaboration

Health constitutes one of the fundamental challenges that mankind is facing in the 21<sup>st</sup> century, especially in the emerging economies and low- and middle-income countries (LMICs). Each year, millions of people lose their life to a number of avoidable and

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\* Scientist F and Head, International Health Division, Indian Council of Medical Research, New Delhi.

preventable diseases especially emerging and re-emerging infections in addition to insurmountable devastation and socio-economic losses through these epidemics. Human development, as elucidated in the Sustainable Development Goals (SDGs), would not be possible without making significant efforts and sustained large-scale investments for bridging health inequities and for redressing infectious diseases, especially in the developing world.

Economists acknowledge that in the emerging global knowledge economy, science and technology returns are likely to be the single highest contributor for the long-term rise and economic advancement of countries. This is more so in health sciences, as they assist employment and boost industry, and also reduce dependence on imports, and save on the tremendous costs on health expenditures and associated socio-economic issues including stigma, discrimination, poverty and so on.

## **Sectoral Profile**

The development of sustainable, affordable, accessible and effective healthcare for all people is among the foremost challenges faced by the world; more so in the developing countries. Success in Achieving the health objectives of Sustainable Development Goals as well as more focused objectives of specific health programmes; and from pandemic/epidemic diseases to fighting non-communicable diseases would depend on the sustainable efforts towards expediting innovative health strategies and breakthrough technologies in gearing- up and improving health systems along with strengthening swift adoption of best practices from one region to the other.

Emerging and re-emerging infectious diseases threaten and pose a clear and ongoing risk to global health, security and economic prospects. The rise in global travel and trade due to greater interconnectedness among countries has resulted in unpredictable outbreaks of infectious diseases of international concern. The recent Ebola outbreak, which originated in West Africa and spread to far-

off countries like US, Spain, Germany, France, among others with massive economic impact, is an example indicating that diseases at present have no boundaries. While source and virulence of the next emerging pathogens are difficult to predict, it is anticipated that the next major outbreak may be far more severe than Ebola. The diseases of a concern can be Neglected Tropical Diseases (Crimean-congo Hemorrhagic fever virus, Flavivirus diseases, Lassa fever virus, Nipah virus, Rift Valley fever virus, Chikungunya virus, Zika virus), Coronaviruses (MERS Co-V & SARS), and HIV/AIDS, Tuberculosis, Malaria among others. The South-East Asia is a hotspot for emerging infectious diseases, particularly, zoonotic and vector-borne diseases as the result of many factors including population growth, mobility, urbanisation and environmental changes such as agriculture and livestock intensification, deforestation and climate change. Among the factors that coalesce in East and South-East Asia in increasing risk of emerging infectious diseases is ecological factors, which allow rapid pathogen mutation and host adaptation for example, Dengue, re-assortments of influenza virus and emergence of drug resistance. The Yemen's cholera outbreak, which spread rapidly at the end of April 2017, affected the largest number of people in the world; as the suspected cholera cases rose to half a million mark and led to approximately 2000 deaths, owing to deteriorating hygiene and sanitation conditions and disruptions in water supply across the country.

In future, most of the diseases are likely to emerge from Africa or Asia, which are home to one-third of human population. These are the very countries where animals, humans and birds all live in close proximity, and are also experiencing epidemiological shift towards non-communicable diseases (cancer, diabetes, cardiovascular diseases).

On the services delivery front, health systems in South-East Asia have witnessed bold developments challenging existing regimes and have stimulated much debate. Reforms have led the Philippines and

Indonesia to devolve their health-care delivery systems. Sri Lanka has a universal healthcare system that offers one of the highest quality health-care systems in the South Asia at a shockingly low cost. Thailand's brave declaration on compulsory licensing to produce and import essential medicines, and Indonesia's refusal to share samples of H<sub>5</sub>N<sub>1</sub> influenza viruses with WHO sparked major diplomatic debates about balancing national imperatives with global interests. The National experiments in expansion of health equity and universal coverage PhilHealth in the Philippines; Vietnam's health fund for the poor; and Thailand's universal health-coverage scheme provides innovative models for equitable financing, which has attracted global interest also. Despite these shared challenges, South-East Asia still lacks fully effective structures for regional health cooperation<sup>1</sup>.

The primary hurdle facing developing nations on the road to excellence in the health sciences is capacity. Whether it is medical and paramedical staff, scientists and researchers, technicians and equipment handlers, manufacturing and quality assurance staff, or regulators – there is a significant gap that needs to be bridged in all these areas. Addressing capacity issues will spark a domino effect in other areas as well that include research and biomedical innovation, collaborative immuno-biological and population-based intervention studies, and industrial and manufacturing collaborations.

In view of the above, it is imperative to establish a functional and robust health surveillance and response mechanism enabling two-way exchange between laboratory and clinical researchers on the one side and public health workers and communities/patients on the other side to enable development of new and targeted interventions for disease management (diagnosis, prevention and treatment) based on the specific regional needs and disease patterns and evidence-based design of innovative strategies and public health programmes.

Such an integrated approach would aid in strengthening systems across the health continuum.



- Understanding disease epidemiology for precise and robust disease tracking, enabled with digital visualization;
- Identifying potential hot-spots or high-risk populations for enabling observational cohort studies and clinical trials of new product development/introduction;
- Preparedness for emerging pandemics/epidemics;
- Identification of pathogen (for infectious diseases) and host (for both infectious and non-communicable diseases) markers to enable designing of new and targeted tools for disease management (including diagnosis, prevention and treatment);
- Design of evidence-based public health actions and programmes.

Hence global community needs to follow a collaborative, inclusive and transparent approach to improve ability to respond to new threats by developing and accelerating access to research interventions which can aid in management of such emergencies. This includes targeted R&D to ensure accelerated development of appropriate diagnostics, vaccines, therapeutics and medical and information technology.

### **Cooperation Scope and Priorities**

India has tremendous expertise in developing independent health and biomedical research capabilities and disease management programmes; which has led to one of the most successful polio eradication programmes worldwide; set-up of centres of excellence in biomedical and health research; advanced capacity in genomics, proteomics and modern biology; and establishment of public and private clinical centres of excellence. It has also proven itself as a global pharmaceutical powerhouse with significant export of drugs across the globe. The country is also growing as a manufacturing hub for vaccines and a leading supplier for developed countries; supplying over 60% of their demand. Facilitated by technology transfer from Indian and global academic research, internal company R&D and

using off-patent space, Indian companies have successfully developed and marketed several affordable biopharmaceuticals since the last decade.

Japan is strong in preparedness planning as well as specific measures of targeting prevention, pandemic control and mitigation. The Japanese government provides detailed action procedures for key stakeholders during each phase of pandemic or epidemic, clear-cut responsibilities, besides guidelines for long-term capacity development. As the result, Japan had no confirmed cases of severe acute respiratory syndrome (SARS). Japan was also unaffected by avian flu, with no confirmed cases by the end of 2009. And an adult HIV/AIDS prevalence rate of less than 0.1 per cent was reported.

In this regard, India and Japan can join hands towards development and dissemination of interventions (including vaccines) for infectious pandemic diseases, which may seriously affect society. The current global efforts for Pandemic Preparedness can be leveraged upon through the following : World Bank Global Pandemic Emergency Facility; The Coalition for Epidemic Preparedness Innovation (CEPI) for developing vaccines against epidemics (led by India through Secretary, Department of Biotechnology);The Global Research Collaboration for Infectious Disease Preparedness (GloPID-R), a network of funders of emergency outbreak research with an objective to rapidly activate research funding in specific areas related to etiology, vaccines, diagnostics and data sharing; The Chatham House project on data- sharing in infectious disease surveillance; and Pandemic Product Development Committee by the WHO.

As an economy in transition, India offers lucrative partnership opportunities to the region towards jointly enhancing capabilities in health sciences. The country is one among the few developing countries that have made significant strides in every aspect of health; a plethora of high-quality yet affordable clinical service facilities. Catering to patients from multiple countries, India has

established centres of global excellence in clinical and biomedical research with a strong network of collaborations across the North and South; successfully delivered one of the most effective polio eradication programmes worldwide; have been a key contributor in global response to pandemics. India is in a unique position, of being a developing country and yet steadily and gradually has developed significant capabilities in health and biotechnological research. India's research output includes over 60,000 research publications and filing of hundreds of domestic health care and pharma patents every year. Furthermore, a significant portion of vaccine supplies and formulation of drugs across the world are developed and supplied by India. India is harnessing its capabilities not just to fuel its own health R&D growth, but is working with various Asian and African nations to enhance their capabilities in disease prevention and management.

India has more than 300 US FDA approved pharmaceutical firms, the highest number of FDA approved firms outside the US. Besides, the country has provided nearly half of all the investments by low- and middle-income countries (LMICs) in neglected diseases R&D; of which close to 60% of public investment was through the Indian Council of Medical Research (Policy Cures, 2015). Although this represents only 2% of the combined global investment, a quarter of new neglected disease products have been registered since 2000. In the policy innovation space, India is an early adopter of successful models from around the world, including open source, public-private partnership, early-stage research development, entrepreneurship platforms and incubators, and international engagement through product development partnerships (PDPs).

There is also a growing demand to encourage African entrepreneurship in health sciences through technology transfer, training and hands-on experience. India's proven track record in this domain and significant pharmaceutical, nutraceutical, traditional medicine, and diagnostic and medical device exports across the globe, coupled with emerging innovation platforms such as the Biotechnology

Industry Research Assistance Council (BIRAC), the Open Source Drug Discovery (OSDD) initiative, and Pharmaceuticals Export Promotion Council of India (Pharmexcil) can play a leading role in strengthening the ecosystem and creating an enabling environment geared towards product development in the region.

Besides gaining access to strategic knowledge and specific technical skills, there are strong reasons for Asia and Africa to consider enhanced industrial partnerships in health and biotechnology. Additionally, discovery, evaluation and commercialization of new health and biomedical products is characterized by high costs, high risks and high returns. Partnerships help minimize costs and distribute risks, while maintaining high returns due to expanded market.

Due to the growing partnership between India and Africa in medical tourism, tele-medicine, along with the establishment of domestic branches and clinical centres of Indian medical conglomerates in Africa, there is a rising demand for improving access to Indian drugs and vaccines in African nations. This calls for policy alignment and streamlining of regulatory practices to enable the free flow of affordable pharmaceutical products in the African market. Considering the current state of global economies, the Governments of India and Japan can play the role of a facilitator than that of a doer. This can be in the form of incentives and some possible areas for such incentives are as follows.

- **Export of pharma products to Africa:** Supply quality medicines at concessional rates for major diseases like HIV/AIDS, TB, Malaria, Cardiac diseases. May be governments can procure and supply medicines through a special agency.
- **Local manufacturing in Africa by Asian firms:** This can be through joint ventures; may be through a Government Fund for technology transfer. For example, India has gained considerable experience in manufacturing generic pharmaceutical products and this expertise can be shared with the African continent in developing indigenous pharmaceutical industries. That can

contribute to Africa's goal of eradicating many of its chronic diseases.

- Setting- up health care facilities including traditional medicine by Indian/Japanese firms
- Export of human resources
- Opening more tele-medicine centres
- Medical tourism in India (e.g. Ayurveda and Allopathy also)
- Scholarships for Africa in Asian medical and nursing colleges
- Setting -up medical colleges
- Training and exchange of experts in policy and law in IPRs and also in drug regulation
- R&D- for example, India has a very good experience with an alternative route of drug discovery in its Open Source Drug Discovery (OSDD) programme. India could consider partnering with Africa in its innovative R&D programme of the Open Source Drug Discovery project of the Council of Scientific and Industrial Research with a view to finding drugs for diseases affecting Africa the most.

On the African governments' side, faster drug marketing approval for generic pharmaceuticals, speedier measures for various clearances required for setting- up new ventures in the pharmaceutical sector and also in the health- care sector are required.

Indian/Japanese private and public sector as well as non-governmental agencies can also consider taking up initiatives to bring together philanthropists to contribute towards Africa's determination to achieve health for all in the shortest possible time. Quality of health- care has the potential to transform risks of demographic and disease burdens into a demographic dividend and opportunity to transform pharmaceutical industries. At the same time, political constraints and gaps between accessibility of health care services need to be worked upon.

Asia and Africa share commonalities in disease burden, demographics, resource limitations, inadequate distribution of health personnel, and a common desire to attain self-sufficiency in disease management. At a time when emerging economies are increasingly moving away from Western funding models and looking to develop independent capacities, it is opportune for the two regions to pool together their resources for health innovation.

The landmark India Africa Forum Summit (IAFS) III in October 2015 under the aegis of the Hon'ble Prime Minister of India has set the tone for reinvigorated and forward-looking partnerships between the two regions. Health is among the key areas identified for furthering collaboration with India committing significant resources towards enhancement of health capacities in Africa through proposed Africa Health Fund. The Indian National Health Policy 2017 seeks to promote universal access to good quality health care services and Africa has also set its health agenda referred to as Agenda 2063. These new goals have to be taken into consideration in the formulation of development cooperation activities in the forthcoming decades.

To carry forward this vision of IAFS III in the area of public health, the Indian Council of Medical Research partnered in partnership with five Indian ministries and several African regional scientific and research agencies organized the first India Africa Health Sciences Meet (IAHSM) in September, 2016. In the Meet, 11 cabinet ministers and 400 delegates, including senior government representatives, technocrats, industry leaders and scientists, were the participants. The deliberations highlighted the need for India and Africa to conduct joint biomedical and health research to address diseases of common concern through indigenous development of affordable drugs, diagnostics and vaccines, and also enabling knowledge- sharing and capacity- strengthening. Discussions also focused on boosting pharmaceutical trade and developing cooperation to foster affordability of essential drugs and harmonization of regulatory and intellectual property policies.

To formalize this partnership as the India Africa Health Sciences Collaboration, a Memorandum of Understanding (MoU) has been developed by the ICMR (through the Department of Health Research) and the African Union (AU). The collaboration would witness participation from key African agencies such as NEPAD, ASRIC, AOSTI, AAS and NASAC. In Africa, complementary programmes are emerging through the Medical Education Partnership Institute (funded by NIH's Fogarty International Center), Wellcome Trust's DELTAS programme, and World Bank's African Centres of Excellence programme.

To enable two-way training and exchange of scientific personnel engaged in research activities, the existing mechanisms of the Government of India should be leveraged upon, for example International Fellowship Programme for scientists belonging to developing countries by the ICMR, CV Raman fellowship and India Africa R&D Fund by Dept of S &T, ITEC programme by MEA and other GoI initiatives such as the Pan African e-Network and Health Sector, Team-9 Initiative and Focus Africa Programme (to boost bilateral trade and investment/commerce between two regions). Some of the major Indian pharmaceutical joint ventures or subsidiaries manufacturing or trading in Africa are: Cipla Ltd, Ranbaxy Laboratories, Dr Reddy's laboratories, Glenmark Pharmaceuticals, IPCA Laboratories, Parentearl Drugs, Emcure Pharmaceutical Ltd, Aurbindo Pharama Ltd, J B Chemicals, Cadila Healthcare, Lupin Ltd, and Intas Pharmaceutical Ltd.

Tokyo International Conference on African Development (TICAD), a major global economic policy forum, initiated by Japan in the early 1990s has played a critical role in facilitating African development initiatives under the dual principles of African ownership and international partnership. With regard to "Resilient Health Systems for Quality of Life," one of the priority areas in the Nairobi Declaration of TICAD VI, Japan would steadily translate "G7 Ise-Shima Vision for Global Health" into action in Africa. To

this end, it would work jointly to realize effective measures against communicable and non-communicable diseases; attaining universal health coverage through resilient systems; strengthening emergency responses; and promoting R & D innovation and capacity building.

Historically, India and Japan have deep-rooted links through oriental culture and religion, which originated in India. Considering purposeful S&T cooperation between the two countries, a Science and Technology Initiative to support pure science research is being implemented through India-Japan Joint Committee (IJJC) on the Cooperation in S&T. The Department of Science and Technology (DST) has initiated a value-based partnership with the Japan Society for the Promotion of Science (JSPS) and Japan Science and Technology Agency (JST) through MEXT (Ministry of Education, Culture, Sports, Science and Technology). Subsequently there has been substantial cooperation in emerging areas of modern biology, healthcare, agriculture, nanotechnology, robotics, alternative sources of energy, etc. A number of students visited Japan under the annual “Japan-Asia Youth Exchange Program in Science” also known as the “SAKURA Exchange Program” implemented by the DST and the JST.

India also has a long standing cooperation with Japan in the health sector. The Japan International Cooperation Agency (JICA) has provided technical and grant-in-aid cooperation to ICMR’s institute in Kolkata – National Institute of Cholera and Enteric Diseases (NICED). This cooperation (during 1998-2008) resulted in capacity strengthening and technology transfer aiming to reduce enteric diseases in India. Cooperation between NICED and Okayama University in emerging infectious diseases has further strengthened this collaborative network. Most recently, cooperation between the ICMR and the National Institute of Infectious Diseases, Japan, was formalized through a Letter of Intent in 2016 for development of integrated surveillance covering epidemiology and genomic data of antimicrobial resistance for comparative studies.



Memorandum of Cooperation (MoC) between Indian Ministry of Health & Family Welfare and Ministry of Health, Labour and Welfare of Japan covers fields of health care services, HRD, health information systems, disease surveillance and health research. The MoC between Central Drugs Standard Control Organization (CDSCO), GoI, and Ministry of Health, Labour and Welfare of Japan has established the Medical Products Regulation Dialogue and Cooperation Framework to facilitate constructive dialogue on raw materials for pharmaceutical use, biological products, medical devices, quasi-drugs, cosmetic products, and associated administrative and regulatory policies.

The presence of a huge Indian diaspora in many African nations and Japan, and the fact that a significant majority of our populations is under the age of 35, we have an opportunity and responsibility to utilize this demographic dividend to its full potential. Our common concerns and fight against poverty, nutrition, sanitation, infrastructure, health and health-care delivery, all demand innovative, sustainable and most importantly, regionally relevant solutions. Cognizant to this demand, the AAGC is shouldering responsibility and has taken a step forward in setting up platforms for development in Africa. Cooperation through the sharing of development solutions – knowledge, skills, experiences, best practices, policies, know-how, and resources – is essential for scaling research capabilities in developing countries towards attaining self-sufficiency in disease management. The complex nature of health problems faced by the Africa and Asia demands a unique and multifaceted solution – one addressing critical issues, including attracting best scientific talent for research, securing requisite investment, and leveraging low-cost technologies and products to bridge gaps.

The AAGC has committed substantial support towards the development of Africa with dedicated focus on capacity- building, sharing of technical know-how and globally collaborative academic linkages between the Asian and African regions through existing efforts to strengthen and leverage regional synergies to contest shared challenges in health sciences.

Considering the remarkable similarities in the Indian and Japanese partnerships with Africa towards the development of innovative health technologies and strengthening health systems, there is a compelling case for converging and synergizing both initiatives to achieve the best possible outcomes in the shortest period of time and leveraging on complementary strengths and investments to propel shared interests. The mobilization of the highly ambitious Asia Africa Growth Corridor opens possibility of transforming each of these independent partnerships to an exponentially greater scale.

### **Specific Projects and Recommendations**

The foundational principles for the partnership under the AAGC are Reciprocity; Leveraging complementary strengths and existing platforms; Exploring creative funding models; and Acknowledging diverse regional priorities.

The collaborative health projects under the AAGC can be disease specific or agnostic, but would help address cutting-edge scientific queries of the day, and aid in influencing clinical outcomes and policies for improving disease management.

### **Recommended Cooperation Projects**

#### ***Health Sciences Research***

- i) Health systems strengthening for pandemic preparedness and emergency response.** Focus on disease surveillance systems interlinked with advanced data technologies for effective and precise epidemic tracking and visualization of transmission dynamics; and capabilities for early tracking of new epidemics, including integrative bioinformatics and bioethics.
- ii) Conduct joint population-based clinical trials.** For addressing diseases of common concern (communicable, non-communicable, emerging/reemerging) and work towards development of new and targeted interventions for disease management (diagnosis,

prevention and treatment); identification of new biomarkers for early diagnosis and development of Point-of-Care diagnostics.

- iii) **Research on Antimicrobial Resistance.** To promote ‘One Health’ approach to tackle cross-cutting issues of AMR in human and animal health, agriculture, food and environment; and forge multi-sectoral collaborations in line with the 2015 WHO Global Action Plan on AMR.
- iv) **Implementation research.** For designing and implementing effective interventions to improve quality in health systems; design evidence-based public health action programmes.

### ***Integrative Product Development and Delivery***

- i) **Facilitate joint product/technology development/validation (for diagnostics, treatment or prevention).** For enabling harmonized regulatory policies, collaborative pharmacopeia and ethical guidelines, joint manufacturing and demand creation/introduction/uptake across regions.
- ii) **Conduct capacity building efforts.** To enhance awareness and mutual recognition of drug regulatory authorities and review mechanisms of CTDs; drug testing, quality control, release criteria and mechanisms.
- iii) **Create B2B platforms.** To support creation of networks of manufacturers, researchers and regulators to facilitate business/investments, promote indigenous manufacturing in Africa, technology transfer and policy interventions.

### ***Capacity Building***

To align research capabilities and improve understanding of regional landscape, needs, strengths and gaps :

- i) Establishing *Joint Centers of Research Excellence* (in Africa/ Japan/India) with advanced capacities in genomics, proteomics, bioinformatics and modern biology through linking with Global experts for support in the latest tools and technologies; Standardization and harmonization of protocols and generation

- of comparable data; Establishment of regional scientific leadership; Knowledge transfer and exchange of best practices.
- ii) Allocate scholarships/fellowships at premier Indian and Japanese institutions, and industrial internships for promising African candidates in medical and paramedical training, clinical and biomedical research, pharmaceutical manufacturing and allied disciplines to facilitate greater technology transfer and building of sustainable capacities and capabilities.
  - iii) Training opportunities can also be offered to Asian post-doctoral researchers at African laboratories to diffuse and imbibe new learning, especially in areas such as Open Science, ICT-enabled medicine, GIS and geo-medicine.
  - iv) Capacity building efforts across the product development value-chain, including manufacturing, cold-chain and supply-chain management, drug standards and licensing, standards and data from clinical trials, among others.

Capacity building partnerships should include expertise available in Indian, Japanese and African institutions and should be enriched through partnerships with other world-class agencies and institutions with relevant expertise to enhance skills in Asian/African regions.

## **The Way Forward**

The complex nature of health problems faced by the Africa and Asia demands a unique and multifaceted solution – one addressing critical issues, including attracting best scientific talent for research, securing requisite investment, and leveraging low-cost technologies and products to bridge gaps. Cooperation through the sharing of development solutions – knowledge, skills, experiences, best practices, policies, know-how, and resources – is essential for scaling research capabilities in developing countries towards attaining self-sufficiency in disease management. The collaborative health projects under the AAGC can be disease specific or agnostic to help address cutting-edge scientific queries of the day, and aid in influencing clinical outcomes

and policies for improving disease management. Capacity building partnerships could include expertise available in Indian, Japanese and African institutions and could be enriched through partnerships with other world-class agencies and institutions with relevant expertise to enhance skills in Asian/African regions.

### **Endnotes**

- <sup>1.</sup> Jose Acuin, Rebecca Firestone, Thein Thein Htay, Geok Lin Khor, Hasbullah Thabrany, Vonthanak Saphonn, Suwit Wibulpolprasert. Southeast Asia: an emerging focus for global health. *www.thelancet.com* Vol. 377 February 12, 2011

### **References**

- Acuin, Jose., Rebecca Firestone., Thein Thein Htay., Geok Lin Khor., Hasbullah Thabrany., Vonthanak Saphonn and Suwit Wibulpolprasert. 2011. Southeast Asia: An Emerging Focus for Global Health. *Lancet*, Vol. 377.
- Govt. of India. 2013. National Action Plan for Pandemic Influenza and New Infectious Diseases, June 7.
- ICMR. 2016. India Africa Health Sciences Meet Report, Indian Council of Medical Research, December.
- RIS. 2015. India-Africa Partnership in Health Care: Accomplishments and Prospects, Research and Information System for Developing Countries, October.
- WHO. 2014. The African Regional Health Report 2014-The Health of the People. Luxemburg.
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