By Aimable Twahirwa;

Scientists are poised to help countries in the East African region expand their pharmaceutical industries by developing locally made innovative products that are technologically demanding in relation to the economic context of low-income countries.

Thanks to project implemented as part of the 5-year Initiative to strengthen the capacities of Science Granting Councils (SGCs) in sub-Saharan Africa to support research and evidence, research institutions and scientists have been supported to conduct bioequivalence studies for generic medicines.

During the implementation phase of this new research, bioequivalence studies were conducted especially to address current challenges faced by pharmaceutical manufacturers across the region with constant competitive and regulatory pressure to upgrade their technological capabilities.

“Most of countries do not have the capacity to conduct bioequivalence studies for generic medicines, so the quality of most locally produced generic medicines is not fully established,” said Prof. Justin Ntokamunda Kadima referring to the situation in East African region.

Kadima is the lead-researcher from the department of Clinical Pharmacology, School of Medicine and Pharmacy at University of Rwanda.

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Mainstreaming STI in pharmaceutical industry

Although there is increasing evidence indicating that the capacity issues to conduct bioequivalence studies for generic medicines across the region seem to have hindered some countries from sustaining these efforts.

While some initiatives are emerging in Uganda and Tanzania, Rwanda and Burundi are in the design phase.

In East Africa, researchers say the characteristics of local drug production are still shaped by each country’s economic and industrial systems, which in turn are the

product of their economic and policy to mainstreaming Science Technology and Innovation (STI) as one of the key agendas for socio-economic development.

They also indicate that pharmaceutical manufacturers face constant competitive and regulatory pressure to upgrade their technological capabilities.

The evolving analytical framework emphasizes the extent to which this upgrade is based on both investment at the enterprise level by building on existing capabilities, as well as the benefits that flow from its basic surrounding industrial environment, it said.

Reducing donor-funded purchases

Initial studies for generic medicines conducted by a team of researchers from the University of Rwanda found that the catalytic properties of the purified enzymes used in the designing of drugs such as the antibiotic amoxicillin capsules and captopril tablets can serve as catalyst for capacity building and the subsequent introduction of bioequivalence studies in East African Community (EAC) member states

This is because the quality of most locally produced generic medicines is not fully established across the region, Prof. Kadima told Rwanda Dispatch magazine in an exclusive interview.

One of the reason justifying this phenomenon is related to the fact that local pharmaceutical industries have been for long deprived of massive business opportunities through donor-funded purchases, he said.

According to him, reliance on donor funds such as the Global Fund to Fight HIV/AIDS, Malaria, and Tuberculosis is clearly not sustainable in the long term when considering that there are many diseases for which local pharmaceuticals in the region are key treatments and for which access to quality medicines is much less advanced.

During the implementation phase, the project has focused on conducting bioequivalence studies to establish links between amoxicillin capsules and captopril tablets, which showed good clinical efficacy to treat a wide variety of bacterial infections in East African region.

“It was a prospective exploratory project aimed at identifying strengths,

weaknesses, and opportunities for local pharmaceutical industry," the Rwandan pharmacists say.

Across East African region, researchers describe pharmaceutical as the core of national healthcare sectors as it serves as one of the most important manufacturing industry.

However, experts note that pharmaceutical manufacturers still face constant competitive and regulatory pressure to upgrade their technological capabilities.

"The evolving analytical framework emphasizes the extent to which this upgrade is based on both investment at the enterprise level by building on existing capabilities, as well as the benefits that flow from its basic surrounding industrial environment," Prof. Kadima said.

Kadima acknowledges that the quality of most locally produced generic medicine across East African region also deprives local pharmaceutical industries of massive business opportunities through donor-funded purchases.

Benefits of locally manufactured drugs

During various workshops and conferences organized by the United Nations Conference on Trade and Development (UNCTAD), the Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) and the Secretariat of the East African Community (EAC), pharmaceutical scientists emphasized the importance to promote coherence of local pharmaceutical production policies and other means of improving access to medicines and medical products in the region and beyond.

Other suggested measures include setting of common external program tariff and protocol of the common market, human capacity building and foreign investment, it said.

Among other major public health, impacts in the use of locally manufactured drugs for therapeutic purposes include the pricing of locally produced products that governments and people could afford and the uninterrupted supply of essential medicines, according to researchers.

"There is also a need to promote the innovation for the development of formulations that is more suitable for local conditions," Prof. Kadima said.