BUILDING THE MOST PROMINENT HIGH-TECH RESEARCH AND DEVELOPMENT CENTERS IN AFRICA: USTAWI BIOMEDICAL RESEARCH INNOVATION AND INDUSTRIAL CENTERS OF AFRICA

Macharia Waruingi, MD DHA

Ustawi Biomedical Research Innovation and Industrial Centers of Africa

Center for Health Systems & Design, College of Architecture, Texas A&M University, College Station, TX, USA

Ustawi Research Institute, Minnetonka, MN, USA

Abstract

People living in Africa do not have access to good quality medical care. Where good quality care is available, it is out of reach of the majority. Much worse, African countries are not at the forefront of biomedical research, development, innovation, and commercialization of biomedical knowledge into commercial products and services. For example, none of the countries in the sub-Saharan Africa (SSA) manufactures its own brand medicines or medical devices. Instead, the SSA countries rely on rarefied manufacture of generic medicines by a fragmented group of entrepreneurs, who are not grounded on a unified platform of knowledge production for scientific discovery of medicines and medical devices. Indeed, the enterprise for translation of science into products for everyday domestic use and clinical care does not exist in Africa. For complete products, African countries rely on importation of all medical, scientific and technological goods and services.

Evidence indicates that no nation ever developed by reliance on importation of knowledge products from outside its boundaries. Any nation that relies on importation of knowledge products becomes a slave to the exporting nation. There is ample evidence in history to show that a nation can only begin to comprehend its own development, first by comprehending its own knowledge through investment in cutting edge research for discovery of knowledge in all fields and translation of the discovered knowledge into commercial products and services that help solve problems of everyday life. Africa's development can only materialize if African countries aligned their vision with intent to build world-class capability for local knowledge production in biomedicine, science, technology, and engineering. Such world-class capability for knowledge production takes place in a center for excellence that integrates advanced scientific research, advanced scientific education and advance scientific translation and commercialization of knowledge products. The absence of such a place means that the vision of many African countries to develop is not achievable.

To overcome this problem, Ustawi Applied is creating the Ustawi Biomedical Research Innovation and Industrial Centers of Africa (UBRICA). Upon completion, UBRICA will be home to ultramodern academic specialty medical centers structured as world class HOSPITALS, centers for advanced science in biomedicine structured for advanced RESEARCH, and centers for biomedical translation and innovation structured for COMMERCIALIZATION and MANUFACTURING.

The phenomenal structure of the UBRICA is underpinned by the theory of advanced academic medical centers that is built on the principle of integration to collocate the functions of advanced research in science technology and medicine [RESEARCH], world class medical and science education [TEACHING], translation of research knowledge products into commercial products for everyday use at home and in the clinical environments [INNOVATION], and delivery of care of the highest quality possible [PATIENT CARE].