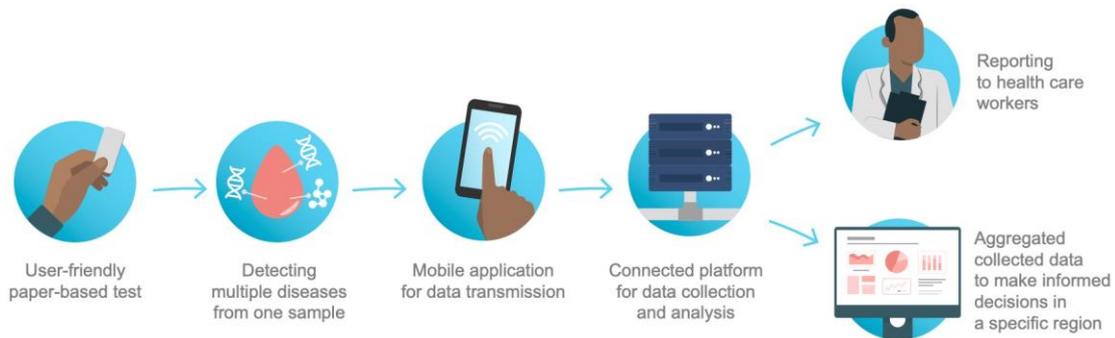


Detecting Multiple Diseases At Once: EU-Funded Didida Project Develops A Cost-Effective Mobile Based Solution In Africa

Didida: detecting multiple diseases at once A cost-effective mobile based solution in Africa



Nairobi, November 9 – The Digital Innovations and Diagnostics for Infectious Diseases in Africa (Didida) had its official kick-off at the Strathmore University. Didida is an ambitious project to develop reliable, low-cost, mobile phone-connected tests to help detect multiple infectious diseases and non-communicable diseases (NCD) at once in sub-Saharan Africa. Didida also plans to invest in digital health infrastructure and train a new generation of African experts to meet the health needs of the continent.

The project, funded by the European Union and the United Kingdom Research and Innovation (UKRI) fund, aims to develop a better diagnostic tool for some of the main causes of deaths in rural areas of Africa such as severe respiratory infections, HIV/AIDS, diarrhea, malaria, or tuberculosis. These five diseases account for nearly 80% of the total burden of infectious diseases and killing more than 6 million people annually.

Diagnostics linked to mobile phone platforms

Didida is a mobile phone-linked digital diagnostic solution which is suitable for areas with limited health infrastructure. The IT builds upon the wide adoption of mobile health and payment systems within sub-Saharan Africa. Didida will integrate a mass manufacturable paper-based test, a mobile application for data transmission and a connected platform for data collection, analysis, and reporting.

A user-friendly and low-cost diagnostic tool

The project is based on the development of DNA and molecular tests that are affordable and can be used without specialized training. By detecting multiple diseases all at once the tool is much more cost-effective and efficient compared to a regular diagnostic process. The initiators, a consortium of 14 partners, have already made significant advances in recent years creating simple tests capable of identifying diseases in the area, including malaria and Hepatitis C in Kenya.

Data to empower health workers and decision makers

Health managers and policy makers will have access to aggregated collected data to make

informed decisions. All technologies are based on open-source, transparent and easily deployable solutions such as m-Health for the mobile data application and the already-existing health data infrastructure DHIS2.

The consortium plans to evaluate the implementation of its multiplex diagnostics in the context of ongoing digital health system strengthening efforts in Western Kenya.

Strengthening research in infectious diseases and NCDs in Africa

Next to the development and roll-out of the diagnostic tool the project plans to strengthen African research capacity through the funding of 16 doctoral fellowships in Africa. These Early-Stage Researchers will participate in dedicated training sessions on all technical aspects of the program, whilst cohort events will provide this new generation of researchers with the diagnostic tools to fight leading diseases in Africa.

The Didida projects run until September 2027 with a funding of nearly 6 million euros from the European Union's Horizon Europe program and 2 million euros from the UKRI fund. The consortium includes 14 partners from eight countries: Kenya, Senegal, Tanzania, Uganda, the United Kingdom, France, the Netherlands, and Italy.

"Didida is a multidisciplinary project that combines health research, socio-economic studies and digital innovation leading to new impacts in clinical diagnostics and engineering. The project has a strong African involvement with an ambition to strengthen capacity across PhD training in institutes and organisations in Sub-Saharan Africa. Our aims include the creation of a user-friendly and low-cost digital diagnostic tool integrated on mobile phone platforms to improve healthcare. The project will also impact on the decentralization of health care in Europe and the United Kingdom." said Jonathan Cooper, Professor of Engineering at the University of Glasgow and principal investigator on Didida project.

-----End of this release-----

Note for the editor:

About the Amsterdam Institute for Global Health & Development (AIGHD)

The Amsterdam Institute for Global Health & Development (AIGHD) is a research and education institute with a mission to address challenges in global health and development by conducting collaborative interdisciplinary research, generating insights and solutions, and educating the next generation of global health leaders.

AIGHD conducts collaborative, interdisciplinary research prioritizing infectious disease elimination, antimicrobial drug resistance, chronic care & ageing, urbanization & health, health markets, and economics of human development. It aims to educate and inspire the next generation of global health leaders at undergraduate, post-graduate and professional levels to shape a healthier and more prosperous future for all. AIGHD aspires to accelerate progress on global health objectives by sharing knowledge and insights with global agencies, governments, NGOs and the scientific community.

For more information: <https://www.aighd.org>

About the African Population and Health Research Center (APHRC)

The African Population and Health Research Center (APHRC) is registered as a non-profit organization with 501 (c) (3) status. APHRC is the continent's premier research institution and think tank exploring questions of population health and wellbeing. The Center's mission is to generate evidence, strengthen research and related capacity in the African research and development (R&D) ecosystem and engage policy to inform action on health and development. Headquartered in Nairobi, Kenya with a West Africa office in Dakar, Senegal, APHRC seeks to drive change with evidence led by a growing cadre of research leaders from across Africa. Research agendas are oriented to global and continental development priorities, driven by the belief that Africa and African-generated evidence must be at the forefront of decisions

supporting improved growth and development.

APHRC's program priorities are Health and Wellbeing, Human Development, Population Dynamics and Urbanization, and Data Science and Evaluation thematic areas. Research conducted explores how improving outcomes in the above areas is linked to development and growth on the continent, and how those improved outcomes can help to shape policy, advance domestic resource mobilization and enhance implementation of best practices at national level. In recognition of its outstanding work and contribution to research on sexual and reproductive health, gender equality, and population, the Center was the institutional laureate for the 2015 UN Population Award. Since 2017, APHRC has consistently been ranked among the top think tanks worldwide by the Think Tanks and Civil Societies Program of the Lauder Institute at the University of Pennsylvania.

For more information: <https://aphrc.org>

About the Biostructures and Biosystems National Institute (INBB)

The Biostructures and Biosystems National Institute (INBB) is a national consortium with the membership of 23 Italian Universities. Since 1995 it has operated under the Italian Ministry for Universities and Research supervision. The INBB scientific activities include *Bioinstruments and Bioelectronics, Biomolecules, Biotechnologies, Biosystems and Bioregulations*. More than 600 researchers adhere to INBB. INBB headquarter is in Rome (Italy), whereas the Catania INBB unit at the University of Catania (UNICT) contributes to DI-DIDA scientific activities. UNICT is also involved in DI-DIDA as an INBB-affiliated entity. UNICT-INBB unit is a cross-disciplinary team with a plurennial experience in Surface Plasmon Resonance imaging bioanalytical detection. Research interests focus on developing plasmonic-based biosensors and microfluidic-based platforms for innovative detection strategies with applications in diagnostics.

For more information: <http://www.inbb.it/en/>

About Global Access Diagnostics (GADx)

Global Access Diagnostics (GADx) is a social enterprise prioritising equitable access to diagnostics and driving local manufacturing to create sustainable independent production. GADx is a leading developer of lateral flow and rapid diagnostic technologies, products and services, offering a full suite of services from concept to validation to manufacturing at flexible volumes.

Leveraging our core technology platforms and expertise, we work with companies, researchers and clinicians to help them deliver fast, reliable and accurate diagnosis at the point-of-care. We then facilitate local manufacturing and/or onward distribution throughout the world, with a focus on low- and middle-income countries.

GADx was formed by the acquisition of two companies, Mologic and Global Access Diagnostics, by a consortium of social impact investors called Global Access Health. As part of this transition, GADx became a social enterprise, dedicating its profits and mission to improving the health and wellbeing of underserved populations around the world. We are headquartered in Bedford in the United Kingdom and have a US subsidiary situated in Maine, New Gloucester.

For more information: www.globalaccessdx.com

About Innotope

From the research and innovation cluster of Paris Saclay in France, Innotope provides scientists and businesses from all over Europe with knowledge-based services and consulting to bridge the gap between research and commercial exploitation of innovative technologies or services.

Innotope is leading the Didida project regarding coordination, dissemination, exploitation and communication.

For more information: www.innotrope.com

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About Institut Pasteur

The Institut Pasteur is a non-profit research foundation located in Paris, France. Since its foundation in 1887, it has been recognized as one of the leading biomedical research centres worldwide. It has a distinguished history in the study of infectious diseases, as demonstrated by the ten 'Pasteur' scientists awarded with the Nobel Prize since 1908. Currently, the Institut Pasteur has more than 2,800 international employees divided in 13 Research Departments and 144 Research Units. The Institut Pasteur is also a member of the Pasteur Network, unique model of health cooperation.

The network now consists of 33 institutions in 25 countries and more than 23,000 employees. Along with research, knowledge transfer is a crucial mission of the Institut Pasteur. Its Education Centre receives every year 900 students with more than 300 PhD students in Paris. Furthermore, the Institut Pasteur is also concerned about the need of scientific innovation and technology transfer, acting as an incubator for several start-ups.

For more information: <https://www.pasteur.fr/fr>

About the Institut Pasteur de Dakar

The Institut Pasteur de Dakar (IPD) is a non-profit public benefit foundation based in Senegal whose mission is to advance public health in Senegal and Africa by conducting research, providing training and education, sharing scientific knowledge and advancing vaccine production. Since its founding in 1896, IPD has been at the forefront of the fight against infectious diseases in West Africa. It is one of only four manufacturers worldwide to be prequalified by WHO for yellow fever vaccine.

For more information: <http://www.pasteur.sn>

About PharmAccess

PharmAccess aims to make inclusive health markets work in Sub-Saharan Africa. The PharmAccess integrated approach addresses both the demand and supply side of the health care system and uses the opportunities that mobile technology and data provide to leapfrog development in health markets in sub-Saharan Africa. With the aim to inspire viable and resilient health markets that provide access to care for millions of people in Africa.

Through public-private partnerships, PharmAccess focusses on promoting health insurance plans and other innovative demand-side financing options to protect people from financial hardship; introducing quality standards and improvement methodologies for health care providers; loans, business support, and investments for private health care providers, and introducing value-based health care solutions to empower patients, doctors and financiers alike.

For more information: <https://www.pharmaccess.org>

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About the Kenya Medical Research Institute (KEMRI)

The Kenya Medical Research Institute (KEMRI) is a State Corporation established in Kenya in 1979 through the Science and Technology (Repealed) Act, Cap 250 of the Laws of Kenya operated under the Science Technology and Innovation Act, 2013 as the national body responsible for carrying out research in human health in Kenya. Currently, KEMRI operates under Legal Notice No. 35 of March 2021. KEMRI has grown from its humble beginning over

40 years ago to become a regional leader in human health research. The Institute currently ranks as one of the leading Centres of excellence in health research both in Africa as well as globally.

For more information: <https://www.kemri.go.ke>

About Kilimanjaro Clinical Research Institute (KCRI)

The Kilimanjaro Clinical Research Institute (KCRI) was launched in 2009 as the third and youngest pillar of the three Good Samaritan Foundation (GSF) under the Kilimanjaro Christian Medical Centre (KCMC). KCRI has grown as academic centre for evidence based health interventions in which investigators initiate and conduct medical research to develop evidence for interventions in improving health outcomes and provide research training and necessary research infrastructures and logistics to students, collaborators and partners. KCRI offers a diversified and flexible exposure to both clinical and biomedical research areas in a typical tropical setting. The institute has been participating in infectious disease studies including clinical trials, febrile illness, Bacterial zoonosis, antimicrobial resistance as well as non communicable diseases. In Di-Didi KCRI will work with other partners in development, validation and implementation of the diagnostic test for infectious and non communicable disease.

For more information: <http://www.kcmc.ac.tz>

About the Medical Research Council (MRC)/UVRI

The Medical Research Council (MRC)/UVRI and London School of Hygiene & Tropical Medicine (LSHTM) Uganda Research Unit is an internationally recognized centre of excellence for research and training. Established in 1988 following a request from the Uganda Government to the United Kingdom (UK) Government, our mission is to conduct high-quality research that adds knowledge and leads to improved control of infectious and non-communicable diseases in Uganda, Africa and globally, through translation of scientific findings into policy and practice, and rigorous research capacity building. Over 100 scientists across our three top-notch research facilities in central and south western Uganda deliver research projects of the highest quality, ranging from basic science and epidemiology, to rigorous clinical trials for the prevention and management of diseases of public health importance in Africa. In the last five years, we have trained 58 Master's and 44 PhD students, many from Uganda, but also from other African countries and the UK. Our research and capacity building success are in part because we have been able to attract strategic collaborations in the UK and other countries.

For more information: <https://www.uvri.go.ug>

About Strathmore University Business School

Strathmore University Business School is one of the Schools in Strathmore University that endeavors to transform leadership in Africa. Strathmore Business School (SBS) has taken the responsibility of influencing the leadership of public and private sectors across the continent since its inception in 2005.

The Institute of Healthcare Management (IHM), housed at Strathmore University Business School continues to play a leading role in research and research capacity strengthening within the Business School. First, it is involved in the design and execution of world class academic and executive training Programmes. Secondly, the Institute is involved in securing scholarships, PhD training slots, various ongoing and inception-stage research projects and publications. In addition, it achieves its mandate through close collaboration with several universities, donors and research institutes both locally and abroad.

For more information: <https://strathmore.edu>

About the Ugandan Ministry of Health

Vector Borne & Neglected Tropical Disease Control Division, Ministry of Health.

Uganda has a high burden of Neglected Tropical Diseases (NTDs). These affect mainly the rural poor and result in reduced productivity, hence affecting the development of these populations. The NTDs of the highest public health importance in the country include Lymphatic Filariasis (Elephantiasis), Schistosomiasis (Bilharzia), soil-transmitted Helminths (Intestinal Worms), Onchocerciasis (River blindness), Trachoma, Human African Trypanosomiasis (Sleeping sickness), Visceral Leishmaniasis (Kala-azar), Plague, Buruli Ulcer Disease (BUD), Rabies, Tungiasis (Jiggers), Podoconiosis (non Filarial Elephantiasis), Echinococcosis, Cysticercosis, brucellosis and Leprosy. In addition to this, Uganda is in the post-certification phase for Guinea worm. Currently, there are on-going efforts to prevent, control and eliminate these NTDs in the country with varying degrees of success. NTD control is part of the Uganda National Minimum Health Care Package as highlighted in the Health Sector Strategic and Investment Plan. Control of NTDs will contribute to improved health and socioeconomic situation of the affected populations.

For more information: <https://www.health.go.ug>

About the University of Glasgow

The University of Glasgow is a top world 100 University (THE, QS) and was the Times and Sunday Times Good University of the Year 2022. The University is a member of the prestigious Russell Group of leading UK Universities and has annual research income of more than £180m. As a world-leading, research-intensive University, the University of Glasgow is committed to contributing towards the UN's 17 Sustainable Development Goals (SDGs) and has committed to carbon neutrality by 2030. Glasgow was the first UK University to declare it would divest from fossil fuels within a decade and the first in Scotland to declare a Climate Emergency.

In 2021, the University of Glasgow received a Queen's Anniversary Prize for its national service to the Covid-19 pandemic.

For more information: <https://www.gla.ac.uk>

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