PRESS RELEASE

International research partnership and EDCTP to invest €44m in next-generation antimalarials to combat drug-resistant malaria in Africa

- EDCTP grants the PAMAfrica research consortium €21.9 million over a 5 year period; MMV, Novartis and other partners will provide an additional €22 million.

- The PAMAfrica consortium brings together a global medicines company, a not-for-profit product development partnership and leading academic institutions in Africa and Europe. PAMAfrica aims to develop new medicines for both severe and uncomplicated malaria, designed to combat emerging artemisinin resistance.

- The projects will include development of the first new malaria treatment for babies under 5 kg, a new fast-acting medicine for the treatment of severe malaria, and new combinations to treat drug-resistant uncomplicated malaria.

The Hague, the Netherlands; Geneva and Basel, Switzerland, March 3, 2020. The European & Developing Countries Clinical Trials Partnership (EDCTP) awarded a new grant to the new PAMAfrica research consortium led by Medicines for Malaria Venture (MMV). The consortium will support the development of new treatments for malaria in the most-at-risk populations, including babies, patients with severe malaria, and those with drug-resistant infections. The EDCTP grant of €21.9 million is to be matched by funding from MMV, Novartis and partners. Over a period of five years, the grant will support the development of a portfolio of projects executed under the umbrella of the PAMAfrica research consortium. Clinical trial capabilities in Africa will also be strengthened to ensure each site involved can effectively operate to ICH-GCP regulatory standards. The consortium includes seven research organizations from Burkina Faso, Gabon, Germany, Mozambique, Spain and Uganda. In addition to Novartis, other pharmaceutical company partners may join the consortium.

The PAMAfrica research consortium will conduct three clinical trials, supporting efforts to build clinical capacity and train scientists across Africa. One trial will explore new combinations of compounds, including new chemical classes, for the treatment of uncomplicated malaria in adults and children. These compounds are all known to be fully active against all drug-resistant strains, including the artemisinin-resistant Kelch13 strains.

The second trial will evaluate a new generation, rapid-acting treatment for severe malaria, cipargamin, also known as KAE609, which is being developed by Novartis, supported by a grant from the Wellcome Trust. In the third study, a novel formulation/ratio from Novartis of

the current gold standard treatment artemether-lumefantrine will be tested in newborn infants weighing less than 5 kg or who are malnourished.

Dr Timothy Wells, Chief Scientific Officer of MMV and the coordinator of the PAMAfrica group, said: “All three of these research projects address areas of urgent need in malaria treatment. Antimalarial drug resistance, originally seen in Southeast Asia, is being reported in Africa and may threaten current treatments. It is important to have new therapies that are active against this emerging threat of resistance. The work on newborn infants and in severe malaria is groundbreaking in bringing medicines to this neglected group. Thanks to this critical support from EDCTP we are not only able to bring together the necessary African and European expertise to conduct these projects to address unmet needs, but in doing so, we are also able to support the training and development of the next-generation of leaders in clinical malaria research in Africa.”

Dr Michael Makanga, Executive Director of EDCTP, said: “Malaria continues needlessly to take 405,000 lives a year and must remain a global and national priority in endemic countries. We hope our funding for PAMAfrica will contribute to the development of successful new treatments that will support malaria eradication, while supporting the development of African research capacity.”

Caroline Boulton, Global Program Head, Malaria, Novartis, said: “Despite advances in malaria control, we still have a long way to go. New antimalarials are urgently needed to tackle rising parasite resistance to current therapies. In response, Novartis has committed to advance research and development of a number of next-generation antimalarial treatments. Partnerships play a critical role in helping to bring these novel agents forward and we sincerely appreciate the crucial support of EDCTP to this process.”

The PAMAfrica consortium

Recent reports from the World Health Organization (WHO) and the Lancet Commission on Malaria Eradication have made clear that defeating malaria will demand new tools, including new and better medicines. The 2019 WHO World Malaria Report states that global malaria deaths are declining at a slower rate than in recent years and highlights the need for improved interventions to treat the most vulnerable populations, including babies.

The PAMAfrica consortium was created to take up this challenge and implements a flexible portfolio approach to the development of new malarials. It brings together expertise from its various African and European partners. The consortium activities will be publicised under a dedicated logo.

This project is part of the EDCTP2 programme supported by the European Union

EDCTP

MMV Medicines for Malaria Venture

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pamafrica

Portfolio approach to developing the next generation of malaria treatments for Africa

The following organisations are partners in the PAMAfrica consortium:

Centre de Recherches Médicales de Lambaréné (CERMEL), Gabon https://cermel.org	Dr Ghyslain Mombo-Ngoma, Head of Clinical Operations Department
Centre National de la Recherche Scientifique et Technologique (CNRST) - Institut de Recherche en Sciences de la Santé (IRSS) - Unité de Recherche Clinique de Nanoro (IRSS-URCN), Burkina Faso http://www.urcn.net/index.php/en/	Prof. Halidou Tinto, Regional Director
Eberhard Karls Universität Tübingen (EKUT), Germany www.medizin.uni-tuebingen.de/de/startseite	Prof. Peter Kremsner Director Institute of Tropical Medicine
Manhiça Health Research Centre, Mozambique http://manhica.org/wp/	Dr Eusebio Macete, Director
Fundación Privada Instituto de Salud Global de Barcelona (ISGlobal), Spain https://www.isglobal.org/en/	Dr Quique Bassat, Head of the Malaria Programme
Groupe de Recherche Action en Santé (GRAS), Ouagadougou, Burkina Faso https://gras.bf/	Dr Alfred Tiono, Clinician and Senior Scientist
Infectious Diseases Research Collaboration (IDRC), Tororo, Uganda http://idrc-uganda.org/	Dr Yeka Adoke, Epidemiologist

Medicines for Malaria Venture, Geneva, Switzerland www.mmv.org	Dr Timothy Wells, Chief Scientific Officer
Novartis, Basel, Switzerland www.novartis.com/global-health/malaria	Caroline Boulton, Global Program Head , Malaria, Global Health Development Unit

About MMV
Medicines for Malaria Venture (MMV) is a leading product development partnership (PDP) in antimalarial drug research in its 20th year. Its mission is to reduce the burden of malaria in disease-endemic countries by discovering, developing and facilitating delivery of new, effective and affordable antimalarial drugs. Since its foundation, MMV and partners have developed and brought forward eleven new medicines estimated to have saved around 2.2. million lives.

For more information visit www.mmv.org or contact Elizabeth Poll, Interim Director of Communications, via +41 79 709 59 92 or polle@mmv.org

About EDCTP
EDCTP aims to support collaborative research that accelerates the clinical development of new or improved interventions to prevent or treat HIV/AIDS, tuberculosis, malaria and neglected infectious diseases in sub-Saharan Africa.The second EDCTP programme is implemented as part of the European Framework Programme for Research and Innovation, Horizon 2020.

For more information visit www.edctp.org or contact Gert Onne van de Klashorst, Communication Officer via +31 70 344 0885 or media@edctp.org

About Novartis
Novartis is reimagining medicine to improve and extend people's lives. As a leading global medicines company, we use innovative science and digital technologies to create transformative treatments in areas of great medical need. In our quest to find new medicines, we consistently rank among the world's top companies investing in research and development. Novartis products reach more than 750 million people globally and we are finding innovative ways to expand access to our latest treatments. About 109,000 people of more than 145 nationalities work at Novartis around the world.

For more information visit www.novartis.com or contact media.relations@novartis.com