

MEDIA UPDATE

Novartis and GSK announce collaboration to support scientific research into genetic diversity in Africa

- *Project Africa GRADIENT calls on local researchers to submit proposals exploring the link between genetic diversity and response to malaria and tuberculosis drugs in African patients*
- *Combined funding commitment of GBP 2.8 million (USD 3.6 million) over five years*
- *Researchers based at universities, science councils and other public research organizations across Africa are invited to express ‘intent to submit’ by March 1, 2021*

Basel, January 19, 2021 — Novartis and GSK today announced the launch of a collaboration to support high-quality scientific research investigating the link between genetic diversity across different regions in Africa and its potential impact on response to drug therapeutics.

The Project Africa **G**enomic **R**esearch **A**pproach for **D**iversity and **O**ptimizing **T**herapeutics (GRADIENT), with a combined funding commitment of GBP 2.8 million (USD 3.6 million) over five years, calls on African researchers to submit robust research proposals on the relevance of African genetic diversity to the treatment of malaria and tuberculosis (TB).¹

Lutz Hegemann, M.D., Chief Operating Officer for Global Health at Novartis said: “Novartis has a long-standing commitment to improving and extending the lives of patients around the world. Our efforts include seeking innovative ways to improve the standard of care where possible. This is why we are excited by this important collaboration on scientific research on genetic diversity in Africa. It has the potential to improve the efficacy and tolerability of current and future medicines, starting with two of the most deadly diseases, malaria and tuberculosis. In alignment with our ongoing efforts to strengthen scientific capabilities in lower-resource settings, this project also provides opportunities for training young African scientists in the use of advanced research methodologies and mentoring on drug development.”

Pauline Williams, Senior Vice President Global Health Pharma at GSK said: “At GSK, human genetics is a core pillar of our R&D strategy. Genetic diversity is greater in Africa than in any other continental population resulting in some African patients having varying response to treatments. We are excited to launch Project Africa GRADIENT which aims to catalyze the best science in the continent to optimize treatment responses for malaria and tuberculosis, two infectious diseases that disproportionately affect African populations.”

Project Africa GRADIENT comprises three funding mechanisms to support:

1. **Fellowships:** A limited number of fellowships in academic institutions with a reputation for global excellence to collect and analyse data on determinants of drug response.

2. **Investigator-sponsored research:** Hypothesis-driven research focused on understanding genetic regional variation in drug response.
3. **Seed-Fund:** A limited number of projects to enable the exploration of new research goals, depending on the results from 1 and 2.

Within the scope of the agreement, the South African Medical Research Council (SAMRC) will administer the project, and a Joint Steering Committee will oversee the review of submitted proposals. Priority will be given to research aimed at collecting data from currently under-represented regions and improving the scientific robustness of inconsistent data. All datasets collated are planned to be released in a public database to catalyse a positive change in approach to understanding variations in treatment efficacy and safety for patients across the continent.

Prof. Glenda Gray, SAMRC President and CEO, said: "It is exciting to see more and more global partners taking interest in the challenges of Africa. We are delighted that partners are now seeking to address the challenges of Africa by their quest to understand the fundamental differences between genetics of Africa and the rest of the world."

As a first step, researchers based at universities, science councils and other public research organizations across Africa are invited to express their 'intent to submit' through the [**SAMRC website**](#). Final award recipients are expected to be announced by end of 2021.

About Project Africa GRADIENT

Novartis is reimagining medicine to improve and extend people's lives. The Novartis Global Health & Corporate Responsibility organization drives global efforts in the elimination or control of four flagship diseases: malaria, leprosy, sickle cell disease and Chagas disease.

GSK is committed to improve global health impact through R&D for infectious diseases that affect children and adolescents in the developing world, with a particular but not exclusive, focus on malaria, TB and HIV/AIDS.

In 2018, Novartis and GSK entered into an agreement to fund projects to explore genetic variation across Africa with a potential to influence drug response, which may lead to differences in drug efficacy and safety. Both parties are jointly funding the Project Africa Genomic Research Approach for Diversity and Optimizing Therapeutics (GRADIENT), which will commence with key infectious diseases affecting African populations (i.e. tuberculosis and malaria) with the possibility to expand to other diseases in the future. In 2019, Novartis and GSK appointed the South Africa Medical Research Council as the administrator of the project.

Project Africa GRADIENT builds on GSK's Africa NCD (noncommunicable diseases) Open Lab facilitating research in Africa and contributing to building research excellence and networks across Sub-Saharan African scientists, and follows research supported by the Novartis Institutes for BioMedical Research on African genetic diversity.²

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are based on our current beliefs and expectations regarding future events, and are subject to significant known and unknown risks and uncertainties. Should one or more of these risks or uncertainties materialize, or should underlying assumptions prove incorrect, actual results may vary materially from those set forth in the forward-looking statements. There can be no guarantee that our investigational or approved products will be submitted or approved for sale or for any additional indications or labeling in any market, or at any particular time. Neither can there be any guarantee that such products will be commercially successful in the future. Nor can there be any guarantee that the activities and efforts related to the collaboration between Novartis and GSK described in this media update will be achieved or succeed in the expected time frame or at all. In particular, our expectations regarding our collaboration with GSK and such products could be affected by, among other things, the uncertainties inherent in research and development, including clinical trial results and additional analysis of existing clinical data; regulatory actions or delays or government regulation generally; global trends toward health care cost containment, including government, payor and general public pricing and reimbursement pressures and requirements for increased pricing transparency; our ability to obtain or maintain proprietary intellectual property protection; the particular prescribing preferences of physicians and patients; general political, economic and business conditions, including the effects of and efforts to mitigate pandemic diseases such as COVID-19; safety, quality, data integrity or manufacturing issues; potential or actual data security and data privacy breaches, or disruptions of our information technology systems, and other risks and factors referred to in Novartis AG's current Form 20-F on file with the US Securities and Exchange Commission. Novartis is providing the information in this media update as of this date and does not undertake any obligation to update any forward-looking statements contained in this media update as a result of new information, future events or otherwise.

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 nearly 800 million people globally and we are finding innovative ways to expand access to our latest treatments. About 110,000 people of more than 140 nationalities work at Novartis around the world. Find out more at <https://www.novartis.com>.

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