H3D PARTNERS WITH YEMAACHI TO UTILIZE AFRICAN GENETIC DIVERSITY TO DEVELOP NEW TOOLS FOR IMPROVING TREATMENT OUTCOMES FOR THE AFRICAN PATIENT POPULATIONS

The Holistic Drug Discovery and Development (H3D) Centre at the University of Cape Town (UCT) has entered into a strategic partnership with Yemaachi Biotech, to exploit African genetic diversity by identifying new therapies and platforms that optimize cancer treatments for African patient populations.

This engagement with Yemaachi will include collecting patient information and specimens in order to gain a better understanding of the pharmacogenomics of African populations and the genetic landscape of cancer among African populations, which will inform Yemaachi's precision medicine projects. Additionally, the partnership will benefit from H3D's expertise in drug metabolism assays that will aid in identifying genetic variations associated with liver cancer among Africans.

According to H3D Director Professor Kelly Chibale, *"Due to the paucity of clinical trials in Africa, therapies are not typically optimized for the African patient population, resulting in variable treatment outcomes. Amongst many factors accounting for this is genetic variability in the activity and expression of drug metabolizing enzymes and transporters. This partnership with Yemaachi will ultimately inform patient stratification and dose selection for phase II and III clinical trials for specific existing and new cancer medicines used in Africa."*

The first joint endeavour is the African Liver Project, which leverages the pharmacology expertise at H3D and the genomics and computational biology capacity at Yemaachi to understand how drug metabolism varies across the continent, with the aim of better optimizing treatment regimens for African populations. Variations in drug metabolism are known to contribute significantly towards adverse drug reactions (ADRs). Africa carries a high burden of ADRs owing partly to the use of poorly-optimized drugs and high levels of genetic diversity. Because of the limited representation of Africans in trials worldwide (2% of clinical trial participants are people of African descent), very little is known about how drugs behave among African populations.

"We at Yemaachi are very excited about this opportunity to partner with H3D. Not only is the project one of great importance to healthcare in Africa, but such partnerships are crucial to the development of scientific capacity on the continent – Africans working together to solve African problems," said Dr Yaw Bediako, Yemaachi CEO.

About H3D

Founded and led by Professor Kelly Chibale, H3D is focused on developing technology platforms that allow customization of medicines to African patients' needs and discovering medicines for diseases that predominantly affect African populations. H3D is place where African scientists can utilize their scientific skills and education to improve the health of African patients and to educate the next generation of African pharmaceutical scientists. As the first and only centre of its kind on the African continent with world-class infrastructure, H3D undertakes drug discovery underpinned by the integration of chemistry, biology, and pharmacology, including drug metabolism and pharmacokinetics (DMPK).

About Yemaachi

Yemaachi Biotech is a private research company based in Accra, Ghana, that is working towards lowering the economic burden of cancer on the African continent. Yemaachi uses cutting edge immunogenomics, bioinformatics and artificial intelligence to accelerate the development of cancer detection and cure strategies which have high efficacy regardless of ethnicity, building sustainable biomedical research and community partnerships that aid in the advancement of medicine across Africa.