MEDIA STATEMENT

Unisa and Inqaba Biotec to launch Africa's first next-generation DNA sequencing platform using the PacBio Revio sequencer.

Approved for public release.
DATE: Wednesday, 17 July 2024

In a groundbreaking development for the African continent, the University of South Africa (Unisa) is proud to announce the launch of Africa's first next-generation DNA sequencing platform, the PacBio Revio, developed in collaboration with Inqaba Biotec. The acquisition and installation of this state-of-the-art platform, co-funded by both parties, will be housed at Inqaba Biotec's facilities in Pretoria.

The project will offer next-generation sequencing (NGS) services to the wider scientific community using both the PacBio Revio and the independently acquired PacBio Onso systems. This initiative will significantly boost the capacity for high-quality, long-range sequencing data, enabling comprehensive analyses crucial for studies in genomics and epigenetics.

This strategic partnership underscores the commitment of Unisa and Inqaba Biotec to advancing scientific research and providing cost-effective access to cutting-edge sequencing technologies and represents a significant milestone in enhancing Africa's genomic research capabilities.

"*The decision to partner with Inqaba Biotec in the purchase and operation of the PacBio Revio third-generation long-read DNA sequencing system is a strategic one for Unisa, in line with our biotechnology niche area. It is critical that such systems are placed in high throughput environments, where they can be fully utilised by skilled application specialists to ensure the highest data quality and the most cost-efficient operation. This public-private partnership will achieve that aim to the benefit of Inqaba Biotec, Unisa, and the wider genomics community. The system will ensure we are able to meet the aims of the African BioGenome Project (AfricaBP), and other related genomic initiatives, through the development of the latest generation of de novo reference genome assemblies"* said project leader Professor Ntanganedzeni Mapholi, the Deputy Executive Dean of Unisa's College of Agriculture and Environmental Sciences and Co-chair of AfricaBP.

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"*Inqaba Biotec is eager to have the data from our Revio (and Onso) systems in the hands of our African life scientists, and we are confident that both systems will drive research and development in the academic and personalised genomics spheres in Africa and globally,*" said Dr Oliver Preisig, Executive Director of Inqaba Biotechnical Industries (Pty) Ltd, trading as Inqaba Biotec.

Key highlights

State-of-the-art technology: The PacBio Revio platform is a third-generation long-read DNA sequencing system that enables accurate detection and characterisation of DNA methylation patterns, overcoming the limitations of traditional sequencing technologies.

Collaborative effort: This project is a result of a collaborative partnership between Inqaba Biotec and Unisa, with both parties sharing the capital costs and operational responsibilities.

Enhanced research capabilities: The long-read sequencing technology will provide unparalleled insights into complex biological processes, including gene regulation, development, and disease progression.

Broad community access: The new sequencing services will be available to researchers and scientists across Africa, fostering a collaborative environment for genomic studies and innovation.

The African BioGenome Project (AfricaBP) continues its pioneering work in generating genome sequences of indigenous, endangered, and endemic species from Africa. These efforts are aimed at addressing key questions about species adaptation and informing conservation strategies to manage populations at risk of extinction. The project is dedicated to providing technical support, standardised procedures and scientific directions to conserve the continent's precious genetic resources effectively.

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