



CSIR FuturePHARMA Facility

Africa's first open-access hub for advanced API manufacturing



science, technology
& innovation

Department:
Science, Technology and Innovation
REPUBLIC OF SOUTH AFRICA



CSIR

Touching lives through innovation

The Council for Scientific and Industrial Research (CSIR) has established Africa's first multi-modal, open-access Active Pharmaceutical Ingredient (API) manufacturing hub, capable of producing vaccines, biopharmaceuticals and small-molecule APIs.

This major milestone in African vaccine and pharmaceutical innovation is based in Pretoria and is designed to provide local pharmaceutical companies and small and medium-sized enterprises (SMMs) with access to world-class infrastructure for the development and production of APIs and vaccine candidates, the essential building blocks of medicines.

Africa carries 26% of the global disease burden but produces less than 3% of the world's medicines. More than 95% of APIs are imported, leaving the continent highly vulnerable to global supply chain disruptions, price fluctuations and shortages. The Covid-19 pandemic highlighted the urgent need to reduce this dependency. FuturePHARMA responds directly to this challenge by offering a faster, safer and more resource-efficient approach to API production.



Benefit for industry and SMMs

The facility creates value across the health and innovation ecosystem. Local manufacturers and SMMs gain affordable access to advanced pharmaceutical infrastructure and investigational vaccine production, lowering barriers to entry and expanding production capacity.

Government and health policymakers benefit from reduced import dependency and improved security of supply for essential medicines. Academic institutions and training providers can use the facility as a platform for research, innovation and the development of scarce pharmaceutical skills.



FuturePHARMA facility at a glance

FuturePHARMA is built around two complementary components: the Investigational Vaccines and Biologics Facility and the Small Molecule API Development and Scale-up Facility.

Investigational Vaccines and Biologics Facility

This facility provides end-to-end Current Good Manufacturing Practice capability with a focus on subunit vaccines, virus-like particle vaccines and protein-based biopharmaceuticals. It enables the transition of innovations from laboratory development to early-phase clinical trial production.

Small Molecule API Development and Scale-up Facility

This facility is dedicated to process development, optimisation and pilot-scale manufacturing using modern manufacturing technologies. It can demonstrate batch and continuous manufacturing approaches, strengthening South Africa's local API production capacity.



Bridging the gap between research and manufacturing

Together, these platforms establish a unique national hub that bridges the gap between laboratory-scale research and commercial manufacturing. They enable the production of clinical-grade investigational batches, accelerate the time to market for local innovations and contribute to building the technical and regulatory expertise required for a sustainable pharmaceutical sector.



Partnerships and national relevance

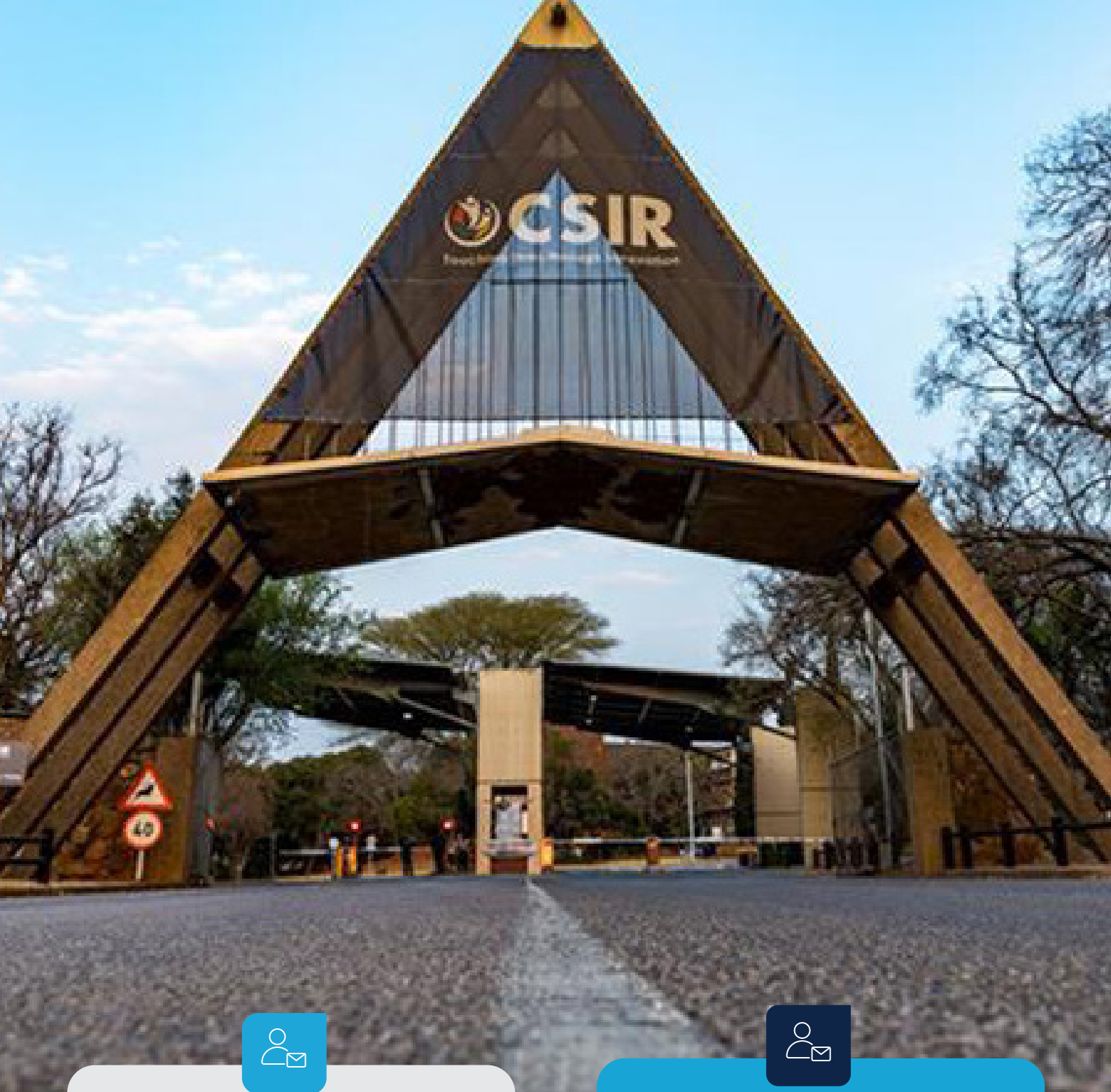
The establishment of FuturePHARMA has been made possible through the support of National Treasury, the German Government and the Technology Innovation Agency's API Innovation Cluster programme.

The facility is further strengthened by academic partnerships, including hosting of the University of Pretoria's proof of concept flow chemistry capability, as well as collaborations with industry partners.

Aligned with key government departments, including the Department of Health; Department of Trade, Industry and Competition; Department of Small Business Development and Department of Science, Technology and Innovation, FuturePHARMA is more than an infrastructure project. It is a national health security asset, an engine for innovation and a pipeline for skills development.

By combining advanced technology, collaboration and access, the facility positions South Africa and the continent at the frontier of pharmaceutical research, development and manufacturing.





Investigational Vaccines and Biologics Facility

Dr Tsepo Tsekoa
Research Group Leader: Biomanufacturing Technology
ttsekoa@csir.co.za



Small Molecule API Development and Scale-up Facility

Dr Jenny-Lee Panayides
Research Group Leader: Pharmaceutical Technologies
jpanayides@csir.co.za



www.csir.co.za



science, technology
& innovation

Department:
Science, Technology and Innovation
REPUBLIC OF SOUTH AFRICA



CSIR
Touching lives through innovation