

## **PRESS RELEASE**

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### **TIA FUNDED INNOVATION AIMS TO IMPROVE ACCESS TO CARE FOR GLAUCOMA PATIENTS**

Glaucoma is a leading cause of irreversible vision loss worldwide; in South Africa, vision loss is one of the leading causes of disability and accounts for 32% of all disabilities. Glaucoma is an eye condition caused by a build-up of fluid pressure in the eye resulting in irreversible damage to the optic nerve. Liqid Medical, a South African medical innovation company has designed a novel ocular implant, the OptiShunt, that uses a simple concept to revolutionise the treatment of glaucoma.

The development of the OptiShunt is funded and supported by the Technology Innovation Agency (TIA) an entity of the Department of Science and Innovation (DSI) through its Health Unit. The TIA Health Unit aims to accelerate innovation technology development and commercialisation of health products and services in South Africa to increase access to health care, reduce cost of health care, enable local manufacture and reduce imports while developing health innovation skills. As an example of this the TIA Health Unit recently launched the API Cluster aimed at reducing South African reliance on imported active pharmaceutical ingredients.

The OptiShunt was conceptualised by Dr Daemon McClunan, an ophthalmologist and the lead innovator for OptiShunt after observing the problems caused by glaucoma in patients while working in rural Northern Cape.

The current treatments available for glaucoma pose a few challenges. Traditional glaucoma devices drain excess ocular fluid by creating a fluid filled blister on the surface of the eye, something known as a “bleb”. Blebs are well known to be uncomfortable, associated with a high risk of complications and failure, and require lifelong follow up and management by patients and doctors. This makes traditional glaucoma surgery one of the least cost effective and most quality of life impacting ophthalmic interventions.

The OptiShunt uses a novel mechanism that creates a self-regulating system which provides highly effective pressure control while avoiding the complications and costs associated with traditional devices. It is designed to limit unsightly bleb formation and the complications that arise.

Vision loss exacerbates poverty as it often leads to unemployment and loss of income, higher levels of hunger and ultimately low standards of living. 97% of visually disabled people are unemployed, 90% of which are from rural communities. South African women are 40% more likely to be visually disabled than men. This is common amongst people of African descent. The highly efficient and cost effective OptiShunt enables access to quality healthcare for the most vulnerable population groups, particularly those in public healthcare settings. This section of the population has been excluded from the use of traditional glaucoma treatment devices due to high costs. Tests conducted to date show that the OptiShunt is 50% more effective than current gold standard in the treatment of Glaucoma.

“Blindness has dire personal, social, and economic impact, particularly among those at the bottom of the pyramid. The goal for TIA is to identify and support innovations that have the potential to address society’s challenges. We are therefore excited to partner with Dr McClunan because the success of OptiShunt would enable access to quality healthcare at a reduced cost with much better clinical outcomes,” says Mr Osmond Muroyiwa, Head of Health at TIA.

The use of the OptiShunt halts the progression of blindness and affords the patients an opportunity of a better life and the ability to contribute to the betterment of their families and communities. Furthermore, the OptiShunt will be manufactured locally and thus holds the opportunity to create jobs, reduce imports as well as enable exports.

The next stage in the development of the technology is to conduct regulatory clinical trials. The company is already in the process of obtaining the necessary quality management systems, regulatory approvals and ultimately certification such as CE marking and approval by the World Health Organisation (WHO).

"By leveraging local resources and industry partners such as the TIA, LIQID Medical is proud to have reached the major milestone of first in man clinical trials 40% faster and 90% more cost effectively than our European and American counterparts. In South Africa we have the unique opportunity to combine the innovative drive of a resource limited setting with the groundbreaking capabilities of highly skilled professionals and cutting-edge technology," Dr Daemon McClunan, Chief Executive Officer, LIQID Medical.

TIA continues to intensify efforts to increase the rate of translation of locally developed technologies; exploit intellectual property to ensure that these are commercialised in a manner that promotes economic growth and improves the lives of South Africans.

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## About TIA

The Technology Innovation Agency (TIA) is a public entity in South Africa that serves as the key institutional intervention to bridge the innovation chasm (gap) between research and development from higher education institutions, science councils, public entities, and private sector, and commercialisation (beneficiation). TIA was established in 2010 and has a national reach with offices in KwaZulu Natal, Western Cape and Gauteng. The main thrust of the mandate of TIA is funding and supporting innovative technologies that show potential to be commercialised. The organisation also has programmes that provide non-financial support to innovators and SMMEs. Lastly, TIA is a catalyst and enabler of innovation through various partnership initiatives locally, in the African continent and globally.

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