

ASX Announcement

29 April 2021

Regeneus partners with Australian Department of Defence to develop Sygenus for combat casualty care

Highlights

- Australian DoD will provide \$300k funding for Sygenus first in human study on pain
- Novel Sygenus technology based on bioactive stem cell secretions
- Continues successful 5-year research partnership with Adelaide University

Regeneus Ltd (ASX: RGS) (Regeneus or the Company), a clinical-stage regenerative medicine company, is pleased to announce that it has partnered with the Australian Department of Defence to develop Sygenus, Regeneus' stem cell bioactive secretome technology, for treating combat casualties.

The Department of Defence (DoD) will provide \$300,000 in funding, that will be used to fund optimisation of the Sygenus formulation for combat casualties and a first in human study to treat pain. The funding is part of the Australian Defence Force initiative, the Defence Industry Competitive Evaluation Research Agreement (ICERA)ⁱ, which will fund eligible Australian SME's with up to \$300,000 per project for up to 18 months.

ICERA is focused on projects with the ability to support Australian Defence Force capability priorities, providing \$36 million over six years in a series of funding rounds with selected projects then considered for potential further funding. ICERA is funded through Next Generation Technologies Fund which focuses on the research and development of emerging and future technologies.

Regeneus Director of Clinical Development and Medical Affairs Dr Sinéad Blaber said, "This is a very exciting development for Regeneus. Our Sygenus technology has a number of attributes that make it suitable for battlefield use. Sygenus is based on stem cell secretions rather than the cells themselves. These bioactive secretions are far more stable than cells and can be formulated into a gel that can be carried as part of a soldier's standard kit. As well as being a replacement for morphine for treating pain, the gel prevents blistering, reduces scarring, and can accelerate wound healing."

The research will be conducted in partnership with Professor Mark Hutchinson's group at Adelaide University. Regeneus and Professor Hutchinson have successfully collaborated on treating pain with Sygenus over the past 5 years.

Professor Hutchinson said "It is great to see this next step in the development of the Regeneus Sygenus product and the translation to a first in human study for pain. We see this as the start of a long-term relationship with the Department of Defence who are actively seeking partnerships with Australian technology companies to develop new, local technologies – with the COVID-19 pandemic emphasising the need for local supply chain access."

The potential for use of Sygenus in combat situations

Sygenus will be used as an analgesic gel applied to damaged tissue.

Currently, morphine is the mainstay for acute severe battlefield pain however once delivered morphine can cause untoward side effects and detracts from a casualty's ability to 'remain capable' on the battlefield - casualties are considered non-ambulatory after administration of morphine. There are well-documented potential addiction risks associated with the use of morphine which have led the military medical community to search for appropriate alternatives to morphine use.

Sygenus gel does not have the negative addiction risk issues associated with morphine use and will also enable the casualty to remain capable on the battlefield. Regeneus has previously reported how the analgesic effect of Sygenus is more potent and longer lasting than morphineⁱⁱ.

This initial project funding from the DoD will focus on pain, however, Sygenus has wider therapeutic effects that could be potentially beneficial in combat casualties. The therapeutic effects of stem cell secretions on radiation exposure, accelerated wound healing, reduced scarring and reducing infections have been outlined in the current research literature. Sygenus would be applicable to both projectile combat casualties and Chemical, Biological, Radiological and Nuclear (CBRN) exposure and has the potential to be explored in future collaborations.

-ENDS-

About Regeneus

Regeneus Ltd (ASX:RGS) is a Sydney-based clinical-stage regenerative medicine company using stem cell technologies to develop a portfolio of novel cell-based therapies. The regenerative therapies seek to address unmet medical needs in human health markets, focusing on neuropathic pain, including osteoarthritis and various skin conditions, with its platform technologies Progenza and Sygenus. Visit www.regeneus.com.au for more information.

Authorisation & Additional information

This announcement was authorised by the Board of Directors of Regeneus Ltd

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ⁱ About ICERA: <https://www.dst.defence.gov.au/icera>

ⁱⁱ ASX Announcement 26 Sep 2017: Sygenus technology shows more potent and longer lasting effect on pain than morphine <https://regeneus.com.au/wp-content/uploads/sygenus-lasting-effect.pdf>