

ASX Announcement

Sygenus technology shows more potent and longer lasting effect on pain than morphine

Sydney, Australia – 26 September 2017

Regeneus (ASX: RGS), a clinical-stage regenerative medicine company, today announced that a preclinical post-operative pain study has shown that topical application of Sygenus, has significantly greater and longer lasting analgesic effect than an injection of morphine.

Sygenus is an allogeneic cell secretions technology platform that comprises cytokines, growth factors and exosomes from adipose-derived mesenchymal stem cells (MSCs). These bioactive molecules are known to reduce pain and inflammation and encourage accelerated healing and repair.

These promising results show that Sygenus is having a sustained analgesic effect above and beyond the anti-inflammatory effect that others have observed with MSCs and their secretions.

Study results

The study, performed by MD Biosciences, a preclinical CRO in Israel, involved modelling a minor surgical procedure. Sygenus (high dose and low dose), applied topically to the wound area was tested head-to-head with a standardised dose of morphine, the opioid analgesic. The analgesic properties of the treatments were assessed using a reflex response time to a thermal stimulus. Importantly, Sygenus showed a dose dependent analgesia with the beneficial effect of the high dose lasting for up to 3 hours. In comparison, morphine only had short-lived benefits and had lost its effect within 3 hours (see figure below).

Investigations into pain

These results will inform our collaborative ARC Linkage program between Regeneus, Macquarie University and the University of Adelaide that is investigating the use of stem cell technology for the treatment of pain. The investigations are being led by Professor Mark Hutchinson of the University of Adelaide and Professor Ewa Goldys of Macquarie University.

Professor Hutchinson is an expert in pain and the role of the immune system in pain. "These are very impressive results, the MSC secretions are having a powerful and rapid analgesic effect that rival and outlast the gold standard opioid analgesic. We are keen to translate this work into our current research programs with the potential to explore this further in clinical trials on pain in humans" said Professor Hutchinson.

About Sygenus

Sygenus is a cell secretions technology platform that utilises the molecules (including cytokines, growth factors and exosomes) that are secreted by adipose-derived MSCs and work to reduce pain and inflammation and encourage accelerated healing and repair. Regeneus has developed technology for the production of secretions of MSCs which have the potential to be used for multiple indications and in a range of delivery methods. Regeneus is currently exploring the use of Sygenus for topical application to inflammatory skin conditions such as acne and the reduction of pain and accelerated healing for wounds.

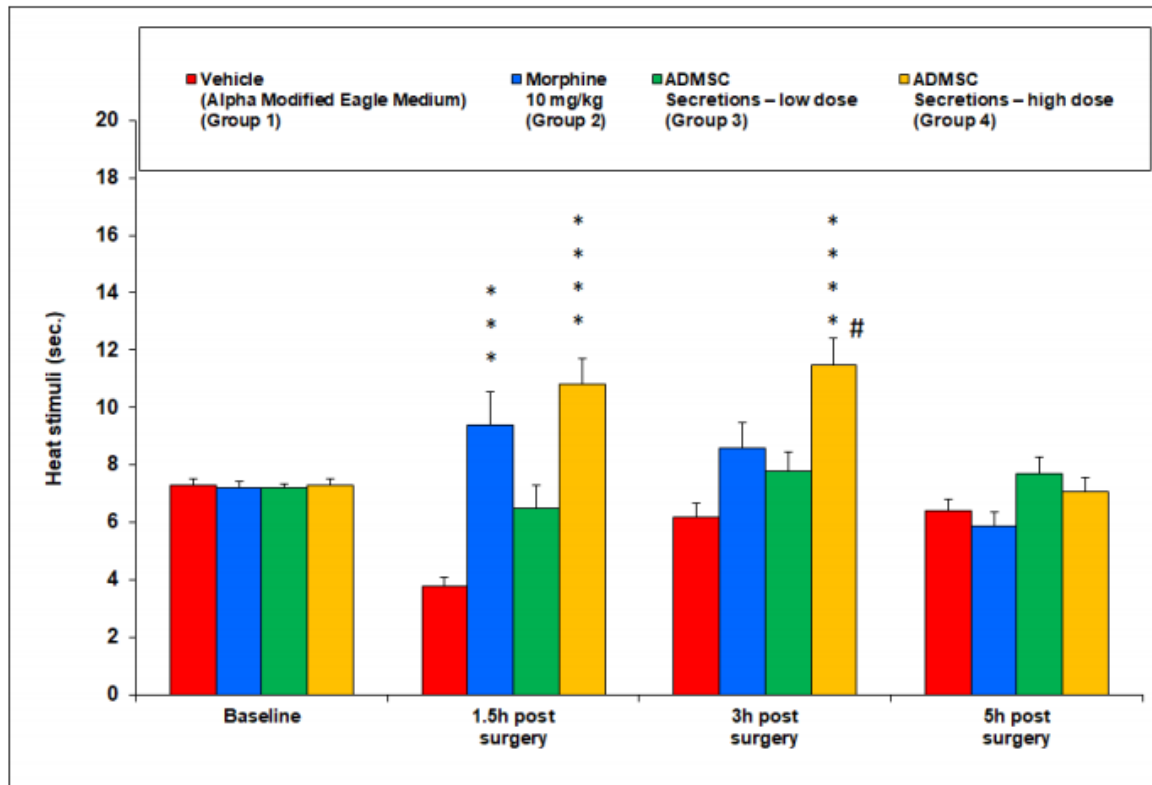


Figure 3: Mean group response to Hot plate test.

*** $p < 0.001$ vs. Vehicle using one-way ANOVA followed by Tukey test.

**** $p < 0.0001$ vs. Vehicle using one-way ANOVA followed by Tukey test.

$p < 0.05$ vs. Morphine using one-way ANOVA followed by Tukey test.

ENDS

About Regeneus:

Regeneus Ltd (ASX: RGS) is a Sydney-based clinical-stage regenerative medicine company using stem cell and immuno-oncology technologies to develop a portfolio of innovative cell-based therapies to address significant unmet medical needs in the human and animal health markets with a focus on osteoarthritis and other musculoskeletal disorders, oncology and dermatology.

Contact for further information:

Investors:

Sandra McIntosh
Company Secretary and Investor Relations
Regeneus Ltd
T: +61 2 9499 8010
E: investors@regeneus.com.au or go to <http://www.regeneus.com.au>