

## **MARINE ANIMAL HEALTH SECURED THROUGH LANDMARK SEA LION SURGERY USING DARVALL VENTILATOR**

**Sydney, Australia: 25 September 2025.** New advances in animal anaesthesia could lead the way to save the lives of diving mammals kept in captivity. Sydney-based Darvall has developed an innovative new ventilator, a world-first in marine mammal anaesthesia, which enabled successful cataract surgery on two Australian Sea Lions at Coffs Coast Wildlife Sanctuary (CCWS) in New South Wales.

The novel ventilator; compact, portable, and designed to replicate the unique breathing pattern of diving mammals, proved crucial in maintaining safe, stable anaesthesia during the complex procedures. Unlike traditional systems that rely on bulky equipment and high volumes of compressed gas, Darvall's ventilator, the size of a backpack, delivers a sustainable solution that reduces inhalant anaesthetic use by up to five times, lowering both environmental impact and operational cost.

Dr Colin Dunlop, CEO and founder of Darvall, said: "Having a system that can both mimic the natural breathing cycle of marine mammals and run independently off bottled driving gas represents a step change. The new ventilator makes these high-risk procedures safer, more sustainable, and far more accessible."

Cataracts are an increasingly common challenge in sea lions, an endangered species, as they are living longer when housed in sanctuaries and therefore develop age-related eye disease. Left untreated, blindness in sea lions can quickly lead to starvation due to the inability to hunt.

The surgeries, performed on Miri (60kg female) and Ozzie (200kg male), were led by an international team of veterinary experts in ophthalmology and marine mammal anaesthesia, in partnership with CCWS staff and SeaWorld technical specialists. Both sea lions recovered smoothly, regaining vision and quality of life.

For CCWS, a not-for-profit conservation and education centre, the milestone underscores the power of innovation and collaboration. Tiga Cross, Managing Director at CCWS, said: "It was a privilege to be part of a world-first. Cataract surgery in sea lions is a massive risk, but Darvall's ventilator proved safer, simpler, quieter and more portable than anything we've used before. This gives our animals the best chance, and it's exciting to think this one-of-a-kind machine could help other marine animals around the world."

Looking forward, the successful use of Darvall's ventilator with sea lions represents a breakthrough for veterinary medicine and conservation alike. With further development and validation, the technology could transform the anaesthetic care of dolphins, seals, and other diving mammals worldwide.

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### **About Darvall**

Darvall is a division of Advanced Anaesthesia Specialists (AAS), a global leader in the design, manufacture, and support of innovative solutions in veterinary anaesthesia, patient warming and monitoring equipment. Darvall is owned and operated by board-certified

veterinary anaesthetists, collaborating with engineers to solve the real-world challenges faced by clinicians. With patient safety as the highest priority, its anaesthesia solutions reduce anaesthetic consumption, costs and lower waste gas emissions protecting both veterinary staff and the environment.

### **About Coffs Coast Wildlife Sanctuary (CCWS)**

Located in Coffs Harbour, NSW, CCWS is dedicated to conservation education and the long-term care of native marine wildlife. Since 1970, it has provided a safe haven for dolphins, sea lions, penguins, turtles, and other species. Through immersive programs, the sanctuary educates visitors on Australia's unique ecosystems while providing lifelong care for over 40 animals, many of which cannot return to the wild. As a not-for-profit charity, CCWS plays a vital role in inspiring conservation action across the region and is working toward establishing a dedicated Wildlife Educational Training Hospital.

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