

2 July 2026

Osteopore completes project for novel intra-operative external ventricular drain guide

Highlights

- Osteopore is delighted to announce that it has successfully completed the project for its novel intra-operative external ventricular drain guide.
- As announced on 10 March 2026¹, Osteopore signed a research collaboration agreement with the National University Hospital (NUH) for the development of a novel ventricular catheter guide to enhance precision and patient safety in neurosurgery.
- The collaboration comprised two phases, with the first focused on the design and prototyping of the external ventricular drain (EVD) guide, while the second phase involves simulated testing of the EVD guide in dry bone models.
- The project team is now seeking additional funding opportunity to progress this project into clinical evaluation phase.
- The global market opportunity for a mechanical intra operative EVD guide is substantial, with an estimated 20,000–25,000 EVD procedures performed annually in the United States alone².

Australian-Singaporean regenerative medicine company **Osteopore Limited** (ASX: OSX; **Osteopore** or **Company**) – a global leader in 3D-printed biomimetic and bioresorbable implants is delighted to announce that it has successfully completed the project for its novel intra-operative external ventricular drain guide.

¹ ASX announcement, "OSX and NUH to co-develop surgical guide in neurosurgery", 10 March 2026.

² Data published by the US Department of Health and Human Services, Centers for Diseases Control and Prevention. "Morbidity and Mortality Weekly Report", 11 April 2024.



As announced earlier on 10 March 2026, Osteopore signed a research collaboration agreement with the National University Hospital (NUH) for the development a novel intra-operative surgical guide for external ventricular drain (EVD) placement to enhance precision and patient safety in neurosurgery. An EVD is a temporary catheter inserted into the brain's fluid spaces to drain excess cerebrospinal fluid (CSF) or blood, relieving dangerous pressure after stroke, trauma, or haemorrhage.

The collaboration is led by Adjunct Associate Professor Vincent Nga, who is the Head of Division and Senior Consultant of the Division of Neurosurgery at NUH.

The first phase of the collaboration comprised of designing and prototyping of the EVD guide, ensuring that it meets the functional needs of the procedure, while the second phase involved simulated testing of the EVD guide in dry bone models, comparing the outcomes against those obtained under neuro-navigation, which uses intra-operative navigation equipment and software systems.

The outcomes of simulated testing demonstrated high precision outcomes, scoring more than 97% precision across 40 unique trajectories into the target brain fluid space of 10 patient specific dry bone models (i.e. 4 trajectories evaluated per dry bone model). These dry bone models were 3D printed models according to specific patients' skull imaging data.

During the tests, matching Magnetic Resonance Imaging (MRI) brain scans of each specific patient was loaded into a state-of-art imaging system. The EVD was then placed into the intended brain fluid space under imaging guidance (control), and solely with Osteopore's newly-developed EVD guide (test group). The results from the test group were then compared against the control group.



In all of the 40 cases, a slightly-modified Osteoplug-C, one of Osteopore's highly used neurosurgery implants, was paired with this EVD guide. This EVD guide is meant to be used together with the Osteoplug-C.

Subject to further clinical validation, this result suggests that the combination of the novel EVD guide and Osteoplug-C is able to attain similar levels of accuracy as compared to neuro-navigation systems. Importantly, it has the potential to significantly reduce misplacement rates due to freehand techniques – reportedly in the range of 25–40%³, which may lead to EVD occlusion and associated complications and mortality rates.

Misplacement does not only mean mal-positioning – it also leads to EVD occlusion and increases the likelihood of new neurological problems. In a study published in 2025, mortality rates due to EVD complications were 28.9% at 30 days and 33.7% at 90 days⁴.

The original collaboration period was for 33 months, concluding 31 December 2028. This timeline has now been significantly accelerated.

Osteopore and NUH are now seeking additional funding opportunities to move this project to the next phase – clinical evaluation. The team is concurrently seeking intellectual property (IP) protection developed in this project, with IP rights jointly-owned. As part of the RCA, Osteopore has the first rights to negotiate for an exclusive worldwide license.

³ Nawabi et al., Clinical Neurology and Neurosurgery, 2023. doi: <https://doi.org/10.1016/j.clineuro.2023.107852>

⁴ Gu et al., Journal of Neurosurgery, 2025. doi: <https://doi.org/10.3171/2024.8.JNS24915>



The global market opportunity for a mechanical intra-operative EVD guide is substantial, with an estimated 20,000–25,000 EVD procedures performed annually in the United States alone⁵, and the Asia Pacific region as the fastest-growing region⁶.

END

This announcement has been authorised for release to the ASX by the Board of Osteopore Limited.

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About Osteopore Limited

Osteopore Ltd. is a global medical technology company founded in Singapore and listed in Australia that commercialises products designed to enable natural bone healing across multiple therapeutic areas. Osteopore's patented technology fabricates specific micro-structured scaffolds for bone regeneration through 3D printing and bioresorbable material.

Osteopore's patent-protected scaffolds are manufactured using a proprietary manufacturing technique with a polymer that naturally dissolves over time to only allow natural and healthy bone tissue, significantly reducing the post-surgery complications commonly associated with permanent bone implants. Our 3D printing technology is unique to Osteopore.

Forward-Looking Statements

Some of the statements appearing in this announcement may be similar to forward-looking statements. You should be aware that such statements are only predictions and are subject to inherent risks and uncertainties. Those risks and uncertainties include factors and risks specific to the industries in which

⁵ Data published by the US Department of Health and Human Services, Centers for Diseases Control and Prevention. "Morbidity and Mortality Weekly Report", 11 April 2024.

⁶ <https://www.grandviewresearch.com/industry-analysis/acute-external-ventricular-drain-market-report>



the Company operates and proposes to operate as well as general economic conditions, prevailing exchange rates and interest rates and conditions in the financial markets, among other things.

Actual events or results may differ materially from the events or results expressed or implied in any forward-looking statement. No forward-looking statement is a guarantee or representation as to future performance or any other future matters, which will be influenced by several factors and subject to various uncertainties and contingencies, many of which will be outside the Company's control. The Company does not undertake any obligation to update publicly or release any revisions to these forward-looking statements to reflect events or circumstances after today's date or to reflect the occurrence of unanticipated events.

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