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ASX Release

emu™ AI methods and novel stroke detection insights published in npj Digital Medicine (Nature portfolio)

Key Highlights

- EMVision's 'EMView' study, which utilised the emu™ radio-frequency (RF) brain scanning platform and proprietary deep-learning models has been published in the high impact journal npj Digital Medicine (Nature portfolio).
- The publication details EMVision's advanced machine learning techniques which have been developed to extract robust signals from limited datasets.
- The study also reported the novel identification of consistent variance in dielectric properties across suspected stroke event types (haemorrhagic, ischaemic, mimic, healthy), providing new scientific insight into how EMVision's technology can differentiate between these event types.
- The publication adds independent, peer-reviewed validation of the intellectual property and innovative processes supporting EMVision's emu™ point-of-care Brain Scanner.

EMVision Medical Devices Limited (ASX:EMV) ("EMVision" or the "Company") is pleased to advise that research into the Company's portable RF brain scanning technology and proprietary deep learning models has been published in the peer-reviewed journal *npj Digital Medicine*, part of the Nature portfolio. npj Digital Medicine is recognised as one of the world's highest impact journals in digital health. The publication provides independent, peer-reviewed validation of results previously announced to the market and reports new scientific insight into the dielectric behaviour of brain tissue across stroke types. The paper, titled "Portable RF brain scanner enables deep-learning-based stroke type detection and ordering of brain-event dielectric permittivity." Khandan, Xu et al 2026, is available at <https://doi.org/10.1038/s41746-026-02996-6>.

Drawing on data from the 'EMView' study and EMVision's non-invasive emu™ brain scanner, the Company's AI team developed deep learning models to discriminate between the two principal types of stroke. To address the constraints of working with a limited dataset, the team applied masked-autoencoder-based self-supervised learning and supervised contrastive learning. As previously reported, in the EMView study, the reported performance¹ of the emu™ on unseen data was:

- Haemorrhagic vs non-haemorrhagic: 92% sensitivity (95% CI: 66.1%-98.2%), 85% specificity (95% CI: 73.8%-92.4%)
- Ischaemic vs non-ischaemic: 95% sensitivity (95% CI: 75.1%-99.9%), 80% specificity (95% CI: 66.3%-90%)

¹ Headline performance previously reported in ASX 'Enhanced Algorithm Performance From Continuous Innovation' May 2025 and ASX 'Algorithms Deliver Excellent Results In EMView Study' Nov 2024 releases. Diagnostic performance metrics from a development study using a constrained dataset may differ from results obtained in larger, prospective, controlled clinical validation.

Beyond classification, the study identified a distinctive and consistent ordering of relative dielectric properties across haemorrhagic, ischaemic, stroke mimic and healthy states, including differences in hyperacute, acute, subacute and chronic ischemia. The findings challenge historic assumptions about the dielectric properties of brain tissue and offer new scientific insight into the dielectric basis of medical emergencies in the brain such as stroke. The Company believes these findings reinforce the potential of its non-invasive scanning technology to support faster differentiation of stroke types at the point-of-care, a critical factor given that treatment pathways for stroke subtypes differ significantly.

Relevance to EMVision's clinical and commercial programs

The publication supports the artificial intelligence foundations underpinning the emu™ Brain Scanner. Furthermore, the self-supervised and contrastive-learning approaches employed continue to advance EMVision's technology through the Continuous Innovation Study. Importantly, this work has generated new intellectual property, for which a patent application has been filed, further strengthening EMVision's IP portfolio.

In addition, the same underlying technology and algorithm pipeline supports EMVision's second generation, ultra-portable First Responder Brain Scanner, designed for pre-hospital use via road and air ambulances.

EMVision CEO and Co-Founder, Scott Kirkland commented "Peer-reviewed publication in a respected Nature portfolio journal is meaningful external validation of the AI methods that form the core of our brain scanning platform. Encouragingly, this work reinforces the same approach we are now advancing through our pivotal trial. I want to recognise our team and collaborators, whose work has not only advanced our diagnostic algorithms but uncovered genuinely new insight into how brain tissue behaves across different stroke types, which deepens our understanding of what our novel scanners detect."

Authorised for release by the Board of the Company.

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About EMVision Medical Devices

EMVision Medical Devices Limited (ASX:EMV) is an innovative Australian medical device company developing a novel approach to looking inside the human body. Our product pipeline includes portable, non-invasive, affordable and safe neurodiagnostic devices.

Our vision is to help transform and improve the timely diagnosis and treatment of stroke and other time sensitive medical emergencies, at the point-of-care.

EMVision has offices in Sydney and Brisbane www.emvisionmedical.com

About Stroke

Stroke is a medical emergency that occurs when blood flow to part of the brain is interrupted, either by a blocked vessel (ischemic stroke) or bleeding into the brain (hemorrhagic stroke). The resulting lack of oxygen and nutrients can rapidly damage brain tissue, leading to disability or death if not treated promptly. Different stroke types require different types of care. Early recognition and fast access to diagnosis and appropriate care are critical, as timely intervention can significantly improve outcomes.

Forward-looking Statements

This release may contain certain forward-looking statements with respect to matters including but not limited to the financial condition, results of operations and business of EMVision and certain of the plans and objectives of EMVision with respect to these items. These forward-looking statements are not historical facts but rather are based on EMVision's current expectations, estimates and projections about the industry in which EMVision operates, and its beliefs and assumptions. Words such as "anticipates," "expects," "intends," "plans," "believes," "seeks," "estimates", "guidance" and similar expressions are intended to identify forward looking statements and should be considered an at-risk statement. Such statements are subject to certain risks and uncertainties, particularly those risks or uncertainties inherent in the process of developing technology and in the endeavour of building a business around such products and services. These statements are not guarantees of future performance and are subject to known and unknown risks, uncertainties and other factors, some of which are beyond the control of EMVision, are difficult to predict and could cause actual results to differ materially from those expressed or forecasted in the forward-looking statements. EMVision cautions shareholders and prospective shareholders not to place undue reliance on these forward-looking statements, which reflect the view of EMVision only as of the date of this release. The forward-looking statements made in this announcement relate only to events as of the date on which the statements are made. EMVision will not undertake any obligation to release publicly any revisions or updates to these forward-looking statements to reflect events, circumstances or unanticipated events occurring after the date of this announcement except as required by law or by any appropriate regulatory authority.

Inherent risks of Investment in Medical Device development Companies

There are a number of inherent risks associated with the development of new medical device products to a marketable stage. The clinical trial process, which is often lengthy, is designed to assess the safety and efficacy of a device prior to commercialisation and there is no guarantee of achieving the outcomes necessary to generate a viable commercial product. Other risks include uncertainty of patent protection and proprietary rights, the obtaining of necessary regulatory authority approvals and the evolving competitive landscape. Companies such as EMVision are dependent on the success of their research and development projects, product development and on the ability to attract funding to support these activities. Investment in research and development and novel product development cannot be assessed on the same fundamentals as trading and manufacturing enterprises. Therefore investment in Companies specialising in such development must be regarded as speculative. EMVision recommends that professional investment advice be sought prior to such investments and cautions investors that the risks of an investment in an entity such as EMVision is not limited to the risks disclosed in this announcement.