

ASX Announcement ([ASX: AXE](#))

15 May 2026

Archer advances Biosensor beta prototype and manufacturing pathway

Highlights

- Archer has built an alpha prototype Biosensor medical device using the Company's Biochip that achieved clinical-grade potassium sensing accuracy.
 - A beta prototype Biosensor suitable for preclinical validation is now under development.
 - The beta prototype is being developed as a robust user-ready, manufacturable system designed to support future patient clinical trials.
 - The beta prototype program represents an important step toward external validation, future clinical studies, and commercial partnership development.
 - The Biosensor is being developed as a platform suitable for applications beyond potassium sensing. Early feasibility testing has commenced for lithium monitoring in blood for bipolar and mood-disorder patients.
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Archer Materials Limited (“Archer”, the “Company”, “ASX: AXE”), a quantum company developing technologies in computing, sensing, and medical diagnostics provides an update on progress toward the development of its Biosensor beta prototype for blood potassium sensing and expansion into other diagnostic applications.

Following the successful completion and demonstration of Archer's integrated alpha prototype (ASX announcement 30 January 2026), which achieved clinical-grade potassium sensing accuracy within a fully integrated prototype system comprising the Biochip, microfluidics, and readout electronics, the Company has advanced to the next stage of product development through construction of its beta prototype Biosensor platform.

The beta prototype program represents an important step toward external validation, future clinical studies, and commercial partnership development. Archer plans to develop multiple versions of the beta prototype with ongoing refinements informed by external testing, studies, and validation activities. The first beta prototype system is expected to become available for testing in the coming months, with additional optimisation and validation planned throughout the second half of 2026, with the target of a fully optimised beta prototype for use in trials in 2027.

Importantly, the beta prototype Biosensor is being developed as a robust user-ready, manufacturable system designed to support future clinical workflows and commercial deployment pathways. Compared to the alpha prototype, the beta platform is intended to deliver improved usability, manufacturability, stability, and integration of the sensing technology into a scalable diagnostic product platform.

Development activities for the beta prototype Biosensor are advancing across multiple engineering and productisation streams, including cartridge engineering, readout electronics, chip integration, and manufacturing preparation. Key progress achieved since the beginning of the year includes:

- Completion of the first beta prototype cartridge design, with initial part revisions now released for manufacturing.
- Advancement of the handheld readout electronics and control system toward manufacturing release beyond the alpha prototype version.
- Commencement of further productisation activities with IMEC, including supply of advanced Biochips and Archer's proprietary functionalisation processes for future beta prototype generations.
- Engagement with contract development and manufacturing organisations (CDMOs) to support future scale up, manufacturing pathways, and clinical deployment activities.
- Advancement of Archer's intellectual property roadmap, including preparation of provisional patent filings associated with this Biochip platform and system integration technologies.

In parallel with potassium sensing development, Archer is also leveraging the Biochip platform to evaluate additional diagnostic applications. Early feasibility testing for monitoring lithium levels in blood is underway, targeting potential applications in the management of bipolar and other mood disorders treated with lithium-based medication. The Company believes these additional applications may broaden the long-term commercial potential of the Biochip platform.

The ongoing progress of the beta prototype Biosensor further de-risks the Biochip technology and positions Archer to generate external validation data in future development phases. These activities are expected to support engagement with Medtech partners, clinical collaborators, and manufacturing groups as Archer advances toward potential commercialisation opportunities.

Commenting on the Biosensor progress, Dr Simon Ruffell, CEO of Archer, said,

“Following the successful demonstration of our alpha prototype device earlier this year, Archer has progressed the Biosensor platform toward the next stage of development with construction of our beta prototype platform for measuring potassium in blood.

The beta prototype program is focused on developing a more refined, user-ready, and manufacturable diagnostic system suitable for external validation, future clinical studies, and commercial deployment pathways. This includes advancement of the cartridge design, handheld electronics, Biochip integration, and sensing platform into a more refined and manufacturable diagnostic system.

Importantly, we are also expanding engagement with IMEC and manufacturing partners to support future scale-up and commercialisation opportunities.

We are encouraged by the early feasibility testing underway for additional applications, including lithium monitoring in blood which may broaden the long-term commercial potential of the Biochip platform.

We believe the ongoing engineering and productisation progress continues to significantly de-risk the Biosensor and Biochip technology and positions Archer well for the next stage of external validation and commercial discussions.”

The Board of Archer authorised this announcement to be given to ASX.

Investor enquiries

Luke Maffei
+61 403 193 579
luke.maffei@automicgroup.com.au

Media enquiries

Dylan Mark
+61 475 783 675
dylan.mark@automicgroup.com.au

About Archer

Archer is a quantum technology company that operates within the semiconductor industry. The Company is developing advanced semiconductor devices, including chips relevant to quantum computing, sensing, and medical diagnostics. Archer utilises its global partnerships to develop these technologies for potential deployment and use across multiple industries.
www.archerx.com.au