ASX Announcement
22 September 2025

INOVIQ'S CAR-NK-EXOSOMES CONFIRMED TO KILL BREAST CANCER CELLS *IN VITRO* AT PETER MAC

- **CAR-NK-exosomes demonstrated strong *in vitro* tumor-killing activity in TNBC cells**
- **Over 90% of TNBC cells were killed within 10 hours of treatment by CAR-NK-exosomes**
- **These results validate INOVIQ's CAR-NK-exosome technology at Peter Mac, a leading cancer research institute**
- **Studies to evaluate the *in vivo* tumour-killing activity of CAR-NK-exosomes in a TNBC mouse model will be reported in Q4 CY2025**

INOVIQ Limited (ASX: IIQ) (**INOVIQ** or the **Company**) is pleased to announce positive results from *in vitro* validation studies of its CAR-NK-exosome therapeutic candidate at the Peter MacCallum Cancer Centre (Peter Mac). The study confirmed the potent anti-tumour activity of INOVIQ's proprietary CAR-NK-exosomes in Triple Negative Breast Cancer (TNBC) cells, an aggressive and difficult-to-treat cancer.

The *in vitro* efficacy of INOVIQ's CAR-NK-exosomes, derived from human CAR-NK cells, was evaluated in cultured TNBC (Hs578T) cells. The results showed rapid and sustained tumour cell killing *in vitro*, with over 90% of TNBC cells eliminated within 10 hours of treatment (**Abstract| Figure 1**). In contrast, control groups, including untreated cells and those treated with non-CAR-NK exosomes, showed minimal tumour cell death. These findings highlight the *potent tumour-killing activity* of INOVIQ's CAR-NK-exosomes to target and destroy solid tumours.

Professor Phillip K Darcy PhD FAHMS, Co-leader of the Cancer Immunology program and Group Leader of the Cancer Immunotherapy Laboratory at the Peter Mac and an INOVIQ Medical and Scientific Advisory Board member said: "*My team has successfully validated the in vitro tumour-killing activity of INOVIQ's CAR-NK-exosomes against TNBC cells. CAR-exosomes represent a next-generation, cell-free therapeutic with potential safety and efficacy advantages over autologous cell therapies for the treatment of solid tumours. We are excited by the opportunity to collaborate with INOVIQ to evaluate the therapeutic effect of CAR-NK-EVs in our well-established animal models*."

CEO Dr Leearne Hinch said: *"Based on these promising in vitro results, INOVIQ will now progress to in vivo studies to evaluate the efficacy of our CAR-NK-exosomes in animal models of TNBC. Successful completion of these initial preclinical studies will enable us to advance the development of CAR-NK-exosome therapy to IND-enabling studies and further clinical development. We are shaping the future of cancer care, targeting solid tumours with innovative cell-free therapies."*

Authorised for release by Company Secretary, Mark Edwards.

FURTHER INFORMATION

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ABOUT INOVIQ LTD

INOVIQ Ltd (ASX: IIQ) is a leader in exosome technology advancing next-generation diagnostics and therapeutics to transform cancer care. Our product portfolio includes commercial-stage exosome isolation products, clinical-stage diagnostics for ovarian and breast cancer detection, and a preclinical CAR-exosome therapeutic program for solid tumours. INOVIQ is shaping the future of cancer detection and treatment to improve patient outcomes. For more information, visit www.inoviq.com.

ABSTRACT

Rapid and Potent Tumour Suppression by EGFR-Targeted CAR-NK-Exosomes in Triple-Negative Breast Cancer Cells

Background: Chimeric antigen receptor (CAR)-natural killer (NK) cell-derived exosomes (CAR-NK-EVs) represent an innovative, cell-free therapeutic approach for cancer treatment, with the potential to improve safety and efficacy over autologous CAR-T cell therapies. INOVIQ Ltd has developed proprietary EGFR-targeted CAR-NK-EVs to address the challenges of treating solid tumours, such as triple-negative breast cancer (TNBC).

Rationale: TNBC presents major therapeutic challenges due to its aggressive behaviour and immunosuppressive tumour microenvironment, which limit the efficacy of autologous CAR-T therapies. CAR-NK-EVs provide a targeted, cell-free alternative with potential enhanced tumour penetration, reduced toxicity and improved scalability, positioning them as a next-generation therapeutic solution for solid tumours.

Study Objective: To evaluate the anti-tumour efficacy of INOVIQ's EGFR-targeted CAR-NK-EVs against TNBC cell lines *in vitro*, with independent validation at the Peter MacCallum Cancer Centre.

Experimental Design: The study was an *in vitro* validation of tumour killing activity. Human NK cells were genetically engineered to express an EGFR-specific CAR construct. CAR-NK cells were expanded and exosomes were harvested using INOVIQ's proprietary EXO-ACE purification technology.

Real-time cytotoxic effects were measured on Hs578T cells, with treatment groups including CAR-NK-EVs, naive NK-EVs, PBS control, and positive control (Lapatinib).

Cell viability and apoptotic activity were monitored over 120 hours using the Incucyte system, with statistical analysis performed via two-way ANOVA and Tukey's multiple-comparisons test.

Key Results: CAR-NK-EVs produced rapid and potent inhibition of live tumour cells:

At 10 hours, CAR-NK-EVs suppressed Hs578T cell growth by over 90% compared to naive NK-EVs (23% inhibition) and controls ($p<0.05$). The effect was sustained to at least 96 hours, outperforming all negative and positive control treatments.

Apoptotic markers showed a negative association with tumour cell growth in CAR-NK-EV treated groups, confirming the mechanism of action.

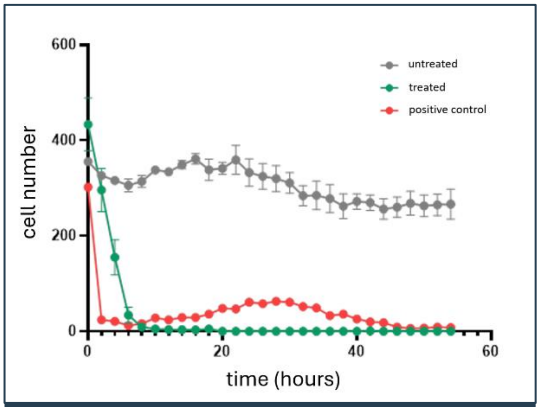

Figure 1. Tumour killing activity of CAR-NK-exosomes. TNBCs (Hs578T cells) were treated with CAR-NK-exosomes (5x 10^6/cell) for up to 60 hours. Cell death was recorded as the number of cells (per field of view) and was monitored in real-time continuously. Untreated cells and cells treated with a cytotoxic agent were used as controls. Within 10 hours, cell number decreased by 90% following CAR-NK-exosome treatment compared to the untreated group.

Conclusions: INOVIQ's CAR-NK-EV *in vitro* tumour killing efficacy was independently validated at Peter Mac. *In vitro* studies demonstrated rapid and sustained tumour cell killing, with more than 90% of TNBC Hs578T cells killed within 10 hours of CAR-NK-EV treatment compared with control groups, which showed minimal effect (naïve NK exosomes: 23% inhibition). Tumour cell death was monitored in real time, confirming potency of CAR-NK-EVs.

Peter Mac's validation supports progressing development of INOVIQ's CAR-NK-EVs to the next step, with *in vivo* efficacy studies in animal models of TNBC commencing in Q4 CY2025.