

12 June 2024

## PLATFORM EXPANDS TO ISOLATING BRAIN DERIVED EXOSOMES FOR ALZHEIMER'S DISEASE

INOVIQ Limited (ASX:IIQ or **INOVIQ**) is pleased to announce that its NEURO-NET™ technology can isolate brain-derived exosomes in Alzheimer's Disease.

NEURO-NET captures exosomes secreted from various brain cells. Exosomes provide a "fingerprint" of the health or disease status of the parent cell and can cross the "blood-brain barrier", making them promising candidates as diagnostics for neurological diseases. The ability to weaponize exosomes and target them to cells is the end game for therapy and cure.

Initial analytical and clinical validation studies showed:

- Exosomes isolated from blood using NEURO-NET contain proteins known to be expressed by brain cells;
- NEURO-NET was superior to other commercially-available methods tested in isolating brain-derived exosomes from blood;
- NEURO-NET enabled the identification of known Alzheimer's biomarkers in exosomes that could not be detected by other methods;
- Analysis of NEURO-NET-captured exosomes identified more than 200 proteins that were differentially expressed in Alzheimer's patients when compared with healthy individuals.

These results were further validated by a larger independent study (48 cases and 44 controls) conducted by the Walter & Elisa Hall Institute, confirming the differential expression of previously identified proteins. Importantly, 47 proteins were uniquely expressed in exosomes isolated from Alzheimer's blood samples and provided robust discrimination between cases and controls.

CEO Leearne Hinch said: *"INOVIQ's NEURO-NET product is an important addition to our exosome portfolio. These results validate the ability of NEURO-NET to isolate exosomes from the brain and provide INOVIQ with opportunities to collaborate with pharma, diagnostic companies and leading academic groups to develop and validate new diagnostic tests using novel and informative biomarkers for brain cancer, neuropsychiatric disorders and neurodegenerative diseases."*

Chairman David Williams said: *"NEURO-NET expands INOVIQ's platform exosome capabilities to develop new diagnostics for neurological conditions. Brain-derived exosomes hold enormous potential for the diagnosis and treatment of neurological diseases like Alzheimer's and Parkinson's."*

Authorised for release by the Company Secretary, Mark Edwards.

### FURTHER INFORMATION

**Dr Leearne Hinch**  
Chief Executive Officer  
E [lhinch@inoviq.com](mailto:lhinch@inoviq.com)  
M +61 400 414 416

**David Williams**  
Chairman  
E [dwilliams@kidder.com.au](mailto:dwilliams@kidder.com.au)  
M +61 414 383 593

## ABOUT INOVIQ LTD

INOVIQ Ltd (ASX:IIQ) is a biotechnology company developing next-generation diagnostics and therapeutics for cancer. INOVIQ has commercialised its fast, efficient and scalable EXO-NET exosome isolation technology for biomarker discovery and diagnostics development, and the hTERT test as an adjunct test for bladder cancer. The company is advancing clinical-stage diagnostics for detection and monitoring of ovarian and breast cancers, and early-stage exosome therapeutics for solid tumours. For more information on INOVIQ, visit [www.inoviq.com](http://www.inoviq.com).

## BRAIN-DERIVED EXOSOMES, APPLICATIONS AND NEURO-NET

**Brain-derived exosomes** are extracellular vesicles (EV) secreted by various cell types from the central nervous system such as neurons, microglia, oligodendrocytes and astrocytes. These exosomes carry nucleic acids, proteins and lipids from the parent cell that can play critical roles in intercellular communication, disease development and progression. Exosomes provide a “fingerprint” of the health or disease status of the cell or tissue of origin and can cross the “blood-brain barrier”, making them promising candidates for both diagnostic and therapeutic purposes. Potential **applications** for brain-derived exosomes include as **diagnostic tools** and **cell-free therapeutics** for *neuropsychiatric diseases, neurodegenerative conditions and brain cancer*.

**NEURO-NET** is a magnetic bead-based exosome isolation system designed using multiple antibodies to capture surface proteins found on brain-derived exosomes. NEURO-NET is suitable for isolation of exosomes from blood, saliva, cerebrospinal fluid and cell culture media. NEURO-NET has been initially validated to identify key differential biomarkers of both Alzheimer’s Disease and Parkinson’s Disease in plasma samples compared to normal healthy controls. Disease-induced changes in brain-derived exosome content may provide novel and informative biomarkers for early detection, prognosis and monitoring of neurological diseases.

The Figure shows differentially expressed proteins from NEURO-NET captured brain-derived exosomes that are either decreased (blue) or increased (red) in Alzheimer’s Disease compared to normal healthy individuals. These proteins will be combined using AI algorithms to develop a potential exosome-based blood test for Alzheimer’s Disease.

