blinklab

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BlinkLab to participate in a clinical study on early diagnosis of dementia in partnership with Erasmus University Medical Center

Highlights

- **Clinical study initiated with Erasmus University Medical Center (Erasmus MC) to evaluate AI-powered diagnostic tools for early accurate diagnosis of frontotemporal dementia (FTD) and Alzheimer's (AD).**
- **BlinkLab tests will be used as part of an *at-home* testing lab, the Digital Dementia Lab, aimed at identifying, developing, and testing a variety of digital biomarkers measuring clinically relevant behaviour for improving early accurate diagnosis of dementia.**
- **Dementia is currently the seventh leading cause of death globally with an associated cost of ~$1.3 trillion - accurate, early diagnosis and treatment has the potential to reduce this burden.**
- **This study will continue for up to 24 months from start and will recruit FTD patients from a large FTD Risk Cohort (250 individuals).**
- **Collaboration agreement ensures that BlinkLab will have an option for exclusive licence to acquire any intellectual property developed as a direct result of the partnership.**

BlinkLab Limited (**ASX:BB1**) (**"BlinkLab"**, "the **Company**"), an innovative digital healthcare company developing smartphone-based AI powered diagnostic tests for neurological disorders, advises it will be participating in a clinical study conducted by Erasmus University Medical Center in Rotterdam.

Dementia is currently the seventh leading cause of death globally with an associated cost of $1.3 trillion[1]. Early diagnosis and treatment have the potential to significantly reduce these costs but long waiting lists to access the appropriate medical specialists and a lack of sensitive biomarkers to detect the early stages of disease are hindering these efforts.

The early stage of dementia is characterised by subtle changes in behaviour and cognition that are noticed by family members but are not yet quantifiable with currently available diagnostic tools. Clinical evaluations are typically a single measurement in time, which fails to reflect the complexity of the disease, leading to poor outcomes in terms of early diagnosis. Delays in diagnosis can significantly impair the effectiveness of treatments, particularly during the early stages of the disease.

[1] https://www.who.int/news-room/fact-sheets/detail/dementia

Remote health monitoring through smart devices with sensors (e.g. smartphones, wearables, virtual reality), also referred to as 'digital biomarkers', allows continuous, objective and potentially more time and cost-efficient assessment that may be more sensitive to detect behavioural and cognitive changes in the early stages of dementia. Currently, there are few harmonised initiatives to investigate digital biomarkers in dementia.

The current study objective is to set-up an overarching *at-home* testing lab, named the Digital Dementia Lab, aimed at identifying, developing and testing a variety of digital biomarkers measuring clinically relevant behaviour for improving early accurate diagnosis of dementia. This includes BlinkLab's smartphone-based remote assessment, including eyeblink conditioning (EBC) and prepulse inhibition of the acoustic startle reflex (PPI). The identification of sensitive digital at-home solutions to detect clinically relevant change in the early stage of the disease will reduce the diagnostic delay and thereby ultimately improve the well-being of patients and their families and decrease the burden on healthcare.

About Erasmus MC
Erasmus MC is one of the largest university medical centres in Western Europe, employing approximately 13,000 people and more than 1,000 full time scientists. The organisation was voted in the top 10 (8th) of the best European universities for Clinical, Pre-Clinical and Health Research and has been voted one of the top 40 of worldwide clinical research institutes.

Henk-Jan Boele, CEO of BlinkLab commented:
"BlinkLab is all about bringing basic neuroscience to society and patients. For BlinkLab the main focus remains neurodevelopmental conditions, including autism and ADHD. However, we know from science that there are opportunities for neurodegenerative conditions as well, as mentioned in our Prospectus. Our collaboration with Dr Jackie Poos at Erasmus MC will further dive into this line of research. This work will be an important driver for the transformation of mental healthcare from the current one-size-fits-all approach to a data-driven, personalised, and affordable system. I am looking forward to working with Dr Jackie Poos and we are confident that our collaboration will offer new possibilities for the advancement of dementia diagnosis and care."

Brian Leedman, Chairman of BlinkLab commented:
"Our latest collaboration with a world leading research organisation provides further validation of the Company's innovative solutions and the power of our smartphone based technology platform to impact a range of high value therapeutic areas in addition to our core focus of autism/ADHD early diagnosis in children. I look forward to the first patients recruited in this new clinical study in the near term and the commencement of our FDA registration study in autism/ADHD in the latter part of this year."

Study design and experimental setup
The main objective of the study is to evaluate whether digital assessment and monitoring technologies such as BlinkLab's tests can improve early diagnosis of FTD and AD.

Participants with a clinical diagnosis of FTD or AD will be included via the outpatient memory clinic of the Alzheimer Center of Erasmus MC. All clinical diagnoses will be established in a multidisciplinary consensus meeting involving neurologists, geriatricians, radiologists, and neuropsychologists. Participants from autosomal (type of chromosome) dominantly inherited FTD families will be included via the FTD Risk Cohort (FTD-RisC) study. This is a longitudinal cohort study tracking first-degree family members of individuals with a genetic form of FTD. These first-degree relatives have a 50% chance of inheriting the genetic mutation causative of FTD. DNA genotyping at baseline allocates individuals to the presymptomatic mutation carrier group or control group. Currently, there are approximately 250 individuals included in FTD-RisC.

Terms of the Collaboration Agreement ("Agreement")

- *Responsibilities:* BlinkLab will provide access to its technology, data and shall facilitate the use of its platform during the term of the Agreement.
- *Financial arrangements*: None at the date of signing (to be determined via mutual agreement in the future and in a separate agreement).
- *Intellectual property ("IP")*: BlinkLab will have an option for an exclusive licence to acquire any intellectual property developed as a direct result of the partnership.
- *Term*: Four years, unless terminated earlier in accordance with the provisions of the Agreement.
- *Termination*: Either party may terminate the Agreement with 15 days written notice to the other party, should either fail to meet their obligations.
- *Confidentiality*: Standard confidentiality terms for an agreement of this nature included.

This announcement has been approved by the Board of Directors.

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About BlinkLab Limited

BlinkLab, a company founded by neuroscientists at Princeton University, over the past several years has fully developed a smartphone based diagnostic platform for autism, ADHD, schizophrenia, and other neuropsychiatric conditions. BlinkLab's most advanced product is an autism diagnostic test that leverages the power of smartphones, AI and machine learning to deliver screening tests specifically designed for children as young as 18 months old. This marks a significant advancement, considering traditional diagnoses typically occur around five years of age, often missing the crucial early window for effective intervention. BlinkLab is led by an experienced management team and directors with a proven track record in building companies and vast knowledge in digital healthcare, computer vision, AI and machine learning. Our Scientific Advisory Board consists of leading experts in the field of autism and brain development allowing us to bridge the most advanced technological innovations with groundbreaking scientific research.