blinklab

6 August 2024

The Pharmacology of Human Decision Making Study with Monash University

Highlights

- **Study provides a unique opportunity to discover the building blocks of cognition with the potential to transform our understanding of a range of clinical conditions including depression, schizophrenia, epilepsy, PTSD.**
- **Potential to demonstrate that drugs targeting glutamatergic neurotransmission can treat some aspects of psychiatric disease symptomology or improve the efficacy of cognitive behavioural therapy.**
- **Evaluates ability of BlinkLab tests to be used as a tool to measure pharmacological effects of existing and novel therapeutic agents.**

BlinkLab Limited (**ASX:BB1**) (**"BlinkLab"**, "the **Company**"), an innovative digital healthcare company developing smartphone-based AI powered diagnostic tests for neurological disorders, is pleased to announce a new study to run in partnership with Monash University. The study will evaluate BlinkLab as a medical device able to monitor the therapeutic effects of ketamine on cognitive processes whereby sensory information is converted into decision making. In the future, results from this study can help facilitate cognitive behavioural therapy outcomes in patients with psychiatric conditions such as depression, schizophrenia, epilepsy, and post-traumatic stress disorder (PTSD).

Significance of the Study

Perceptual decision-making is a fundamental cognitive process where sensory information is transformed into meaningful interpretations of the environment, guiding our actions. This field has flourished through the integration of neuroscience and mathematical modelling , providing a robust framework for investigating the neural mechanisms involved. The core idea is that decisions are based on the accumulation of sensory evidence until a decision threshold is reached. These advancements offer a unique opportunity to uncover the fundamental components of cognition and have the potential to revolutionise our understanding of various clinical conditions. By characterising underlying mechanistic abnormalities, refining clinical classifications, and identifying intervention targets, this research holds promise for significant clinical advancements and new therapies for a variety of psychiatric and neurodevelopmental conditions.

The study, conducted by the School of Psychological Sciences at Monash University will investigate the impact of glutamate challenge on perceptual decision making (including behavioural performance, sensorimotor gating) by administering ketamine while participants perform a prepulse inhibition test using BlinkLab application.

The study will be able to demonstrate whether administration of ketamine can disrupt basic sensory encoding mechanisms, which will be detectable in reduced prepulse inhibition.

Study Design

The study will recruit up to 35 healthy adults between 18-55 years old. Each participant will complete 3 testing sessions after ketamine administration. Their participation is expected to take 4-5 weeks per subject.

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*: Each party will retain all right, title and interest in and to its background intellectual property (copyright, trademarks, designs, know how, patents, plant varieties, confidential information and all other intellectual property as defined in article 2 of the Convention establishing the World Intellectual Property Organization 1967). Any project IP (generated through the study) will be owned by Monash University.
- *Term*: Date of signature by the last party to sign (5 August 2024), until completion of the Research Project as communicated by Monash.
- *Termination*: Either party may terminate this Agreement by giving between 5 and 20 days written notice (at the terminating party's election) to the other party if the other party commits a material breach of the Agreement and does not remedy that breach within 10 days after receiving notice requiring them to do so. Monash may terminate this agreement with immediate effect by giving written notice to BlinkLab.
- *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.