

# blinklab *(ASX:BB1)*

## Early and Accurate Diagnosis of Autism and ADHD

Introducing an AI-powered smartphone  
platform for neurological testing

December 2025, BlinkLab Ltd



PRINCETON  
UNIVERSITY

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# Corporate Snapshot

Next-Generation Digital Solutions for Neurodevelopmental Health



CAPITAL STRUCTURE - ASX:BB1	
Shares on Issue	125.7M
Options on Issue	44.5M
Performance Rights	3.0M
Founders’/ Directors’ percentage	±24%
Market Cap (28 November 2025)	\$114M
Cash (30 September - Quarterly)	\$7.2M



**Henk-Jan Boele,**  
Cofounder and CEO

MD, PhD, Entrepreneur and  
Neuroscientist at Erasmus  
MC and Princeton University



**Anton Uvarov, Co-founder,**  
COO & Executive Director

MBA, PhD, Biotech  
Analyst with Citibank



**Bas Koekkoek**  
Cofounder and CSO

PhD, Assistant Prof. of  
Neuroscience, Erasmus MC



**Peter Boele**  
Cofounder and CTO

MA, Startup Entrepreneur,  
PhD Candidate at  
Erasmus MC



**Brian Leedman**  
Chairman

Experienced Chairman and  
Co-Founder of Five ASX-  
listed Healthcare Companies



**Jane Morgan**  
Director

18+ Years Experience in  
Strategic Investor &  
Media Relations



**Richard Hopkins**  
Director

20+ Years in Corporate  
Leadership Roles with Public  
Biotechnology Companies



# What is Autism?

**“Neurodevelopmental condition that affects how the brain processes sensory information.”**

**Autism can impact:**

- Social development
- Language and communication
- Sensorimotor development
- Behavior and interests





# USA: Economic burden of autism was \$700B in 2024

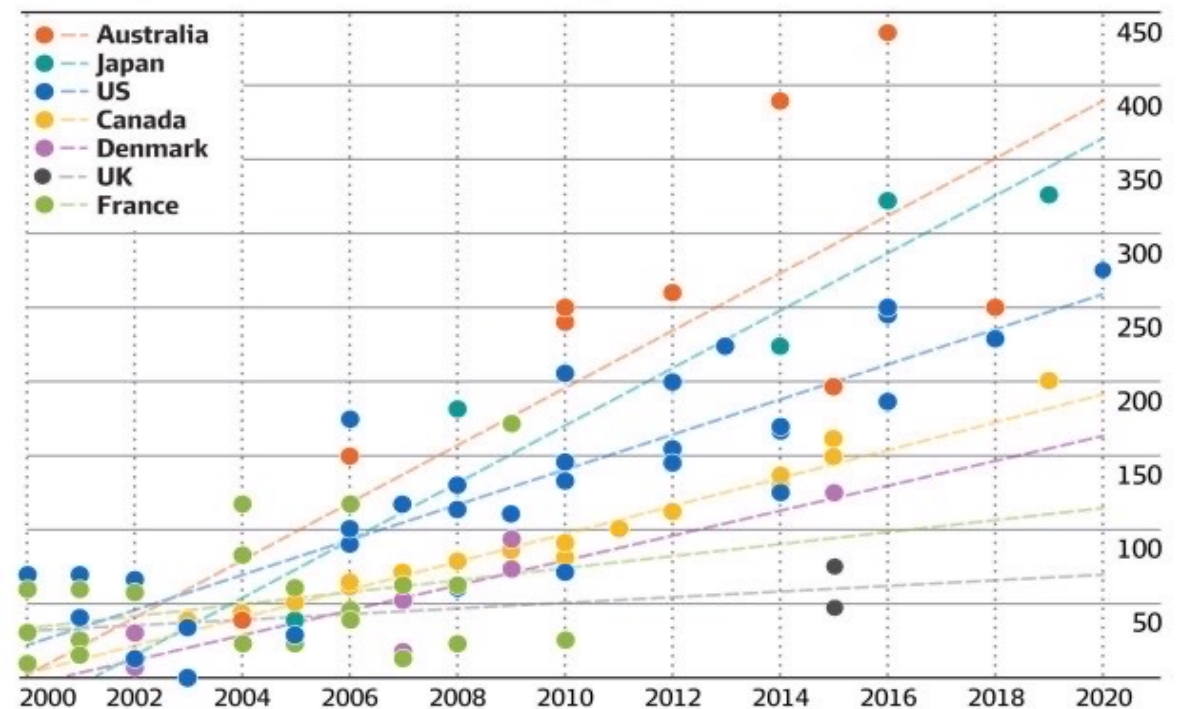
*"The economic burden is significant and alarming"<sup>1</sup>*

➤ Prevalence has grown up to 2-4% among children<sup>2</sup>

➤ Autism healthcare expenses are soaring<sup>3</sup>

- Costs for an autism diagnostic evaluation: **\$1,000 to \$7,000**
- Lifetime cost for individual with ASD: **\$3.6M<sup>3</sup>**

Autism prevalence studies of children, per 10,000



SOURCE: MAATHU RANJAN

<sup>1</sup> Leigh and Du (2015), Forecasting the economic burden of autism in 2015 and 2025 in the US, Journal of Autism and Developmental Disorder

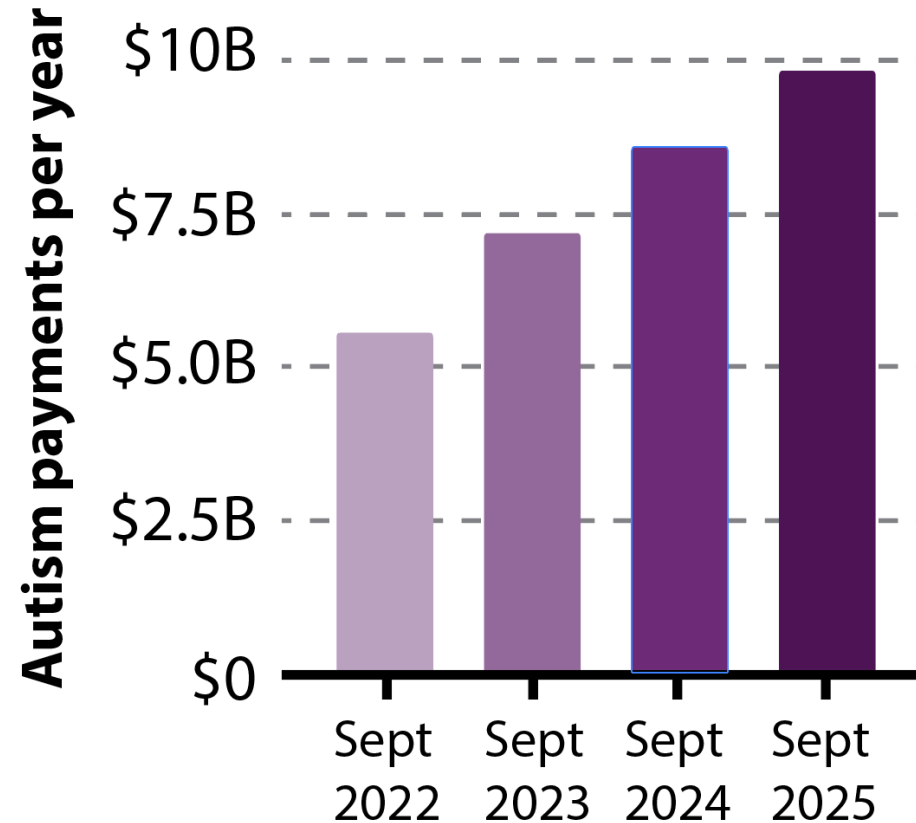
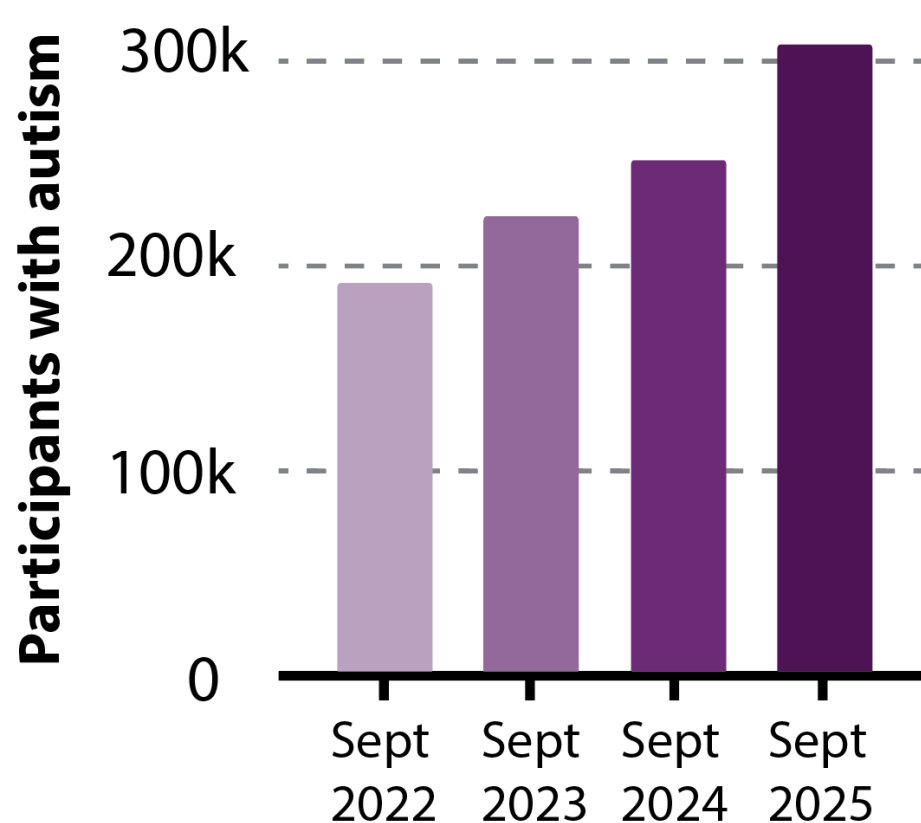
<sup>2</sup> Center for Disease and Control, World Health Organization

<sup>3</sup> Cakir et al. (2020) The lifetime social cost of autism: 1990-2029, Research in Autism Spectrum Disorder

<sup>4</sup> National Disability Insurance Scheme (NDIS)

# Australia: NDIS payments for autism is over A\$9.9B in 2025

*Autism accounts for 41% of all NDIS participants, making it the most common disability.*



# Consensus: Early diagnosis and intervention helps children to develop crucial skills and reduces long-term support needs and costs

## ➤ Early detection and diagnosis is crucial <sup>1-5</sup>

The American Academy of Pediatrics recommends that all children must be screened for autism at ages 18 and 24 months.

Children born annually: US – 3.6M, EU – 3.7M, AU – 296K

## ➤ Early intervention is cost-effective <sup>6-12</sup>

Every dollar spent on early treatment saves more than three dollars in future support costs by the time a child turns 13 (Segal, using NDIS data)<sup>13</sup>.



Image from Southwest Autism Research & Resource Center's (SARRC), one of the sites participating in BlinkLab's 510(k) pivotal study

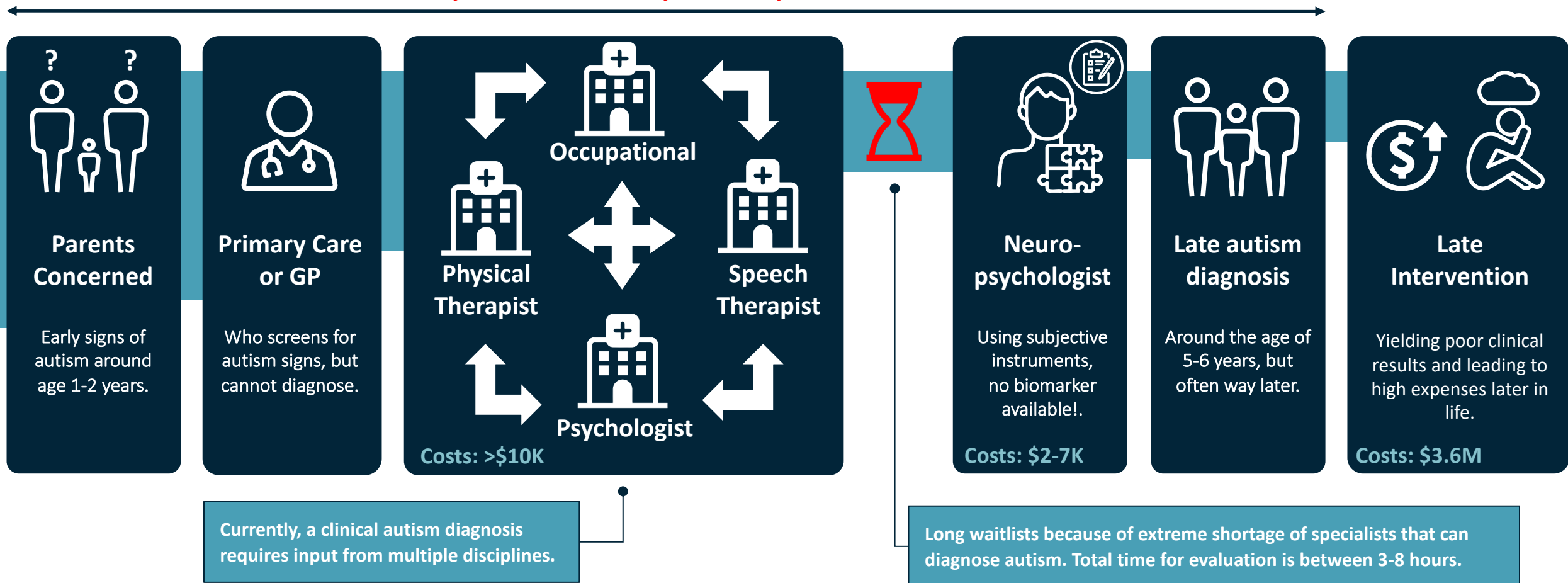
1. National Research Council, Committee on Educational Interventions for Children with Autism. *Educating Children With Autism*. Lord, C., McGee, J. P., eds. Washington, DC: National Academies Press; 2001.  
2. Olley, J. G. (2005). Curriculum and classroom structure. In: Volkmar, F. R., Paul, R., Klin, A., Cohen, D. (Eds.), *Handbook of Autism and Pervasive Developmental Disorders*. 3rd ed. Vol II (863–881). Hoboken, NJ: John Wiley & Sons.  
3. Helt, M., Kelley, E., Kinsbourne, M., Pandey, J., Boorstein, H., Herbert, M., et al. (2008). Can children with autism recover? If so, how? *Neuropsychology Review*, 18(4), 339–366.  
4. Rogers, S. J., & Lewis, H. (1989). An effective day treatment model for young children with pervasive developmental disorders. *Journal of the American Academy of Child and Adolescent Psychiatry*, 28(2), 207–214.  
5. Reichow, B., & Wolery, M. (2009). Comprehensive synthesis of early intensive behavioral interventions for young children with autism based on the UCLA young autism project model. *Journal of Autism and Developmental Disorders*, 39(1), 23–41.  
6. Pye K, Jackson H, Iacono T, Shiell A. Economic Evaluation of Early Interventions for Autistic Children: A Scoping Review. *J Autism Dev Disord*. 2024 May;54(5):1691-1711.  
7. Tinelli M, Roddy A, Knapp M, et al. Economic analysis of early intervention for autistic children: findings from four case studies in England, Ireland, Italy, and Spain. *European Psychiatry*. 2023;66(1):e76.  
8. Hope For Three. (2025). Understanding the High Costs of Autism Care.  
9. University of California. (2015). Autism's costs estimated to be \$500 billion, potentially \$1 trillion, by 2025. ScienceDirect. (2020).  
10. The lifetime social cost of autism: 1990–2029.  
11. Above and Beyond Therapy. (2025). How Much ABA Therapy Really Costs with Insurance.  
12. Cross River Therapy. (2025). ABA Therapy Insurance Coverage for Autism (By State).  
13. Preemptive therapy prior to autism diagnosis may be highly cost-effective, article originally appeared in Autism Research Review International, Vol. 37, No. 2, 2023, by Leonie Segal



# Autism diagnosis is expensive, inefficient, and often late

*The costly labor and time-intensive diagnostic evaluations are unnecessary for many children.*

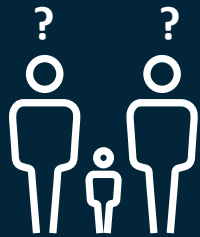
1-3 years of uncertainty for family and child



# BlinkLab's **digital solution** accelerates path to diagnosis

*The costly labor and time-intensive diagnostic evaluations are unnecessary for many children.*

Diagnosis in weeks to months



## Parents Concerned

Early signs of autism around age 1-2 years.



## Primary Care or GP

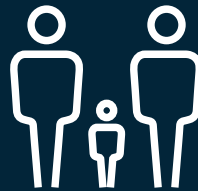
Using **BlinkLab's digital biomarkers** as a highly accurate diagnostic aid for autism.

Pricing: ± \$250



## Neuro-psychologist

Using clinical judgement and subjective rating instruments.



## Early autism diagnosis

Diagnostic certainty at the age of 2-3 years.



## Early and personalized intervention and accurate treatment monitoring

Early therapy improve outcomes, helping children develop crucial skills and reducing long-term support needs. This will significantly reduce in costs later in life.

BlinkLab diagnosis is instantaneous after completing the two 15-minute video session. Only necessary specialists will need to be consulted. BlinkLab is currently conducting their FDA 510(k) regulatory study.



BlinkLab's AI-enabled  
Smartphone-based Assessment

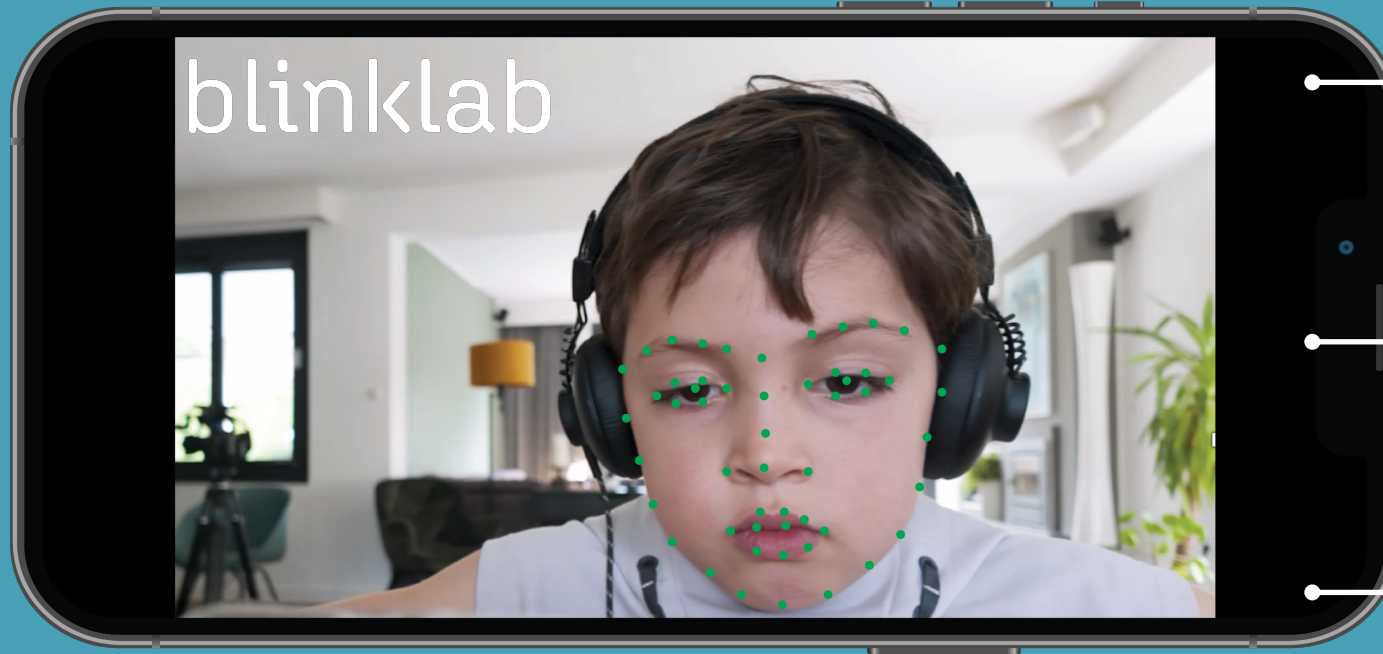
blinklab



# Our patented solution: Neuroscience on a smartphone



Minuscule facial reflexes, evoked by our app, generate a digital biomarker for autism.



## Evokes Facial Reflexes

By presenting visual and auditory stimuli during smartphone use.

## Computer Vision

Facial features are tracked on the smartphone and transferred to the **BlinkLab platform**.

## Biomarker Detection

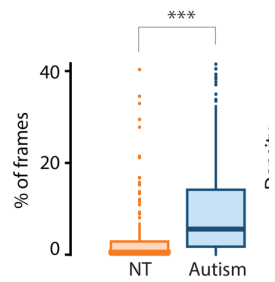
Biomarkers are detected in **real-time** and made available to the clinician.

## Evaluates brain function

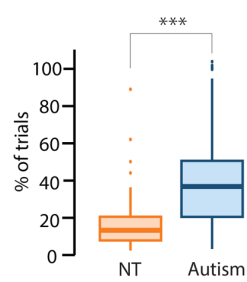
State-of-the art analysis methods and AI modelling to **map the functioning of brain regions involved in autism**.

# Beyond blinks: Tracking of vocal responses and hand/head movements as objective markers for autism

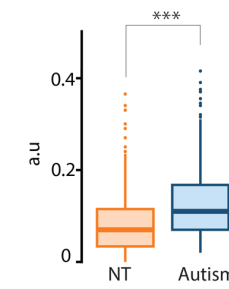
Screen avoidance



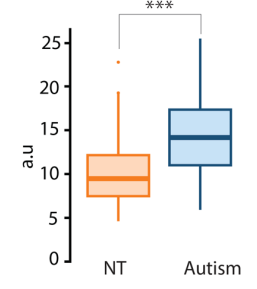
Head rotations



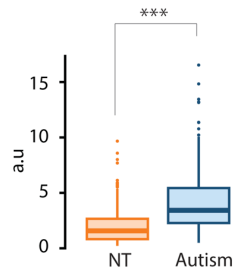
Side eye



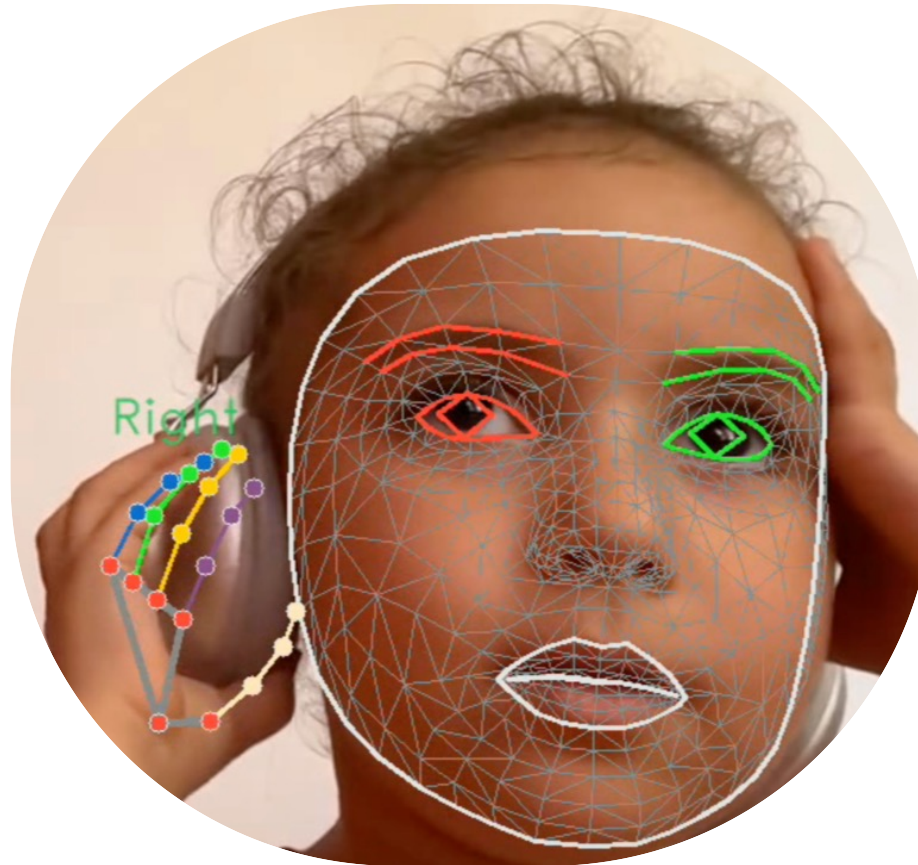
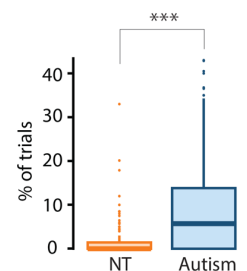
Pupil range



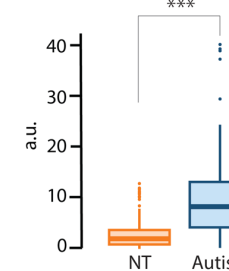
Postural stability



Headphone touches



Mouth openings



Vocalizations

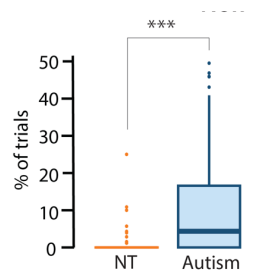


Image used with permission

# Pilot Study Confirms High Diagnostic Accuracy and Readiness for FDA Trial

ASX Announcement 22 October 2025

## Highlights:

- **Pilot Study Completion:** BlinkLab has successfully completed its U.S. Pilot Study of the Dx 1 diagnostic device, involving **485 children**.
- **Strong Diagnostic Performance:** Across a clinically diverse population representing the full spectrum of developmental concerns, BlinkLab Dx 1 achieved **83.7%** sensitivity and **84.7%** specificity relative to clinical reference diagnosis.
- **Performance Exceeds FDA Benchmark for Registrational Study:** In a formal meeting with the U.S. FDA on 16 October 2025, the agency agreed with BlinkLab's pivotal 510(k) study design and confirmed a minimum performance **threshold of >65%** sensitivity and **>65%** specificity for regulatory clearance. Based on FDA feedback, the main study has been refined to enroll approximately **528 participants** across leading U.S. autism research centres, streamlining timelines and reducing cost.



# Why not 100% sensitivity and 100% specificity?

The 'ceiling' for BlinkLab Dx 1 is **85-90%** for both sensitivity and specificity, because...

## ➤ Diagnostic Stability

Autism clinical diagnostic stability is estimated around 80-90% stability.<sup>1-5</sup>



## ➤ Expert Consensus

Autism expert consensus is estimated around 70-80% accuracy.<sup>6-8</sup>

*“BlinkLab’s sensitivity and specificity reflect the limits of the diagnostic process itself. If two expert clinicians or two follow-up years apart don’t always agree, a digital biomarker trained on that label can’t be perfect either.”*

<sup>1</sup> Elias et al. (2022). Diagnostic stability in individuals with autism spectrum disorder: Insights from a longitudinal follow-up study.

<sup>2</sup> May et al. (2021). Parent-reported autism diagnostic stability and trajectories in the Longitudinal Study of Australian Children.

<sup>3</sup> Pierce et al. (2019). Evaluation of the diagnostic stability of the early autism spectrum disorder phenotype in the general population starting at 12 months.

<sup>4</sup> Chawarska et al. (2009). A prospective study of toddlers with ASD: Short-term diagnostic and cognitive outcomes.

<sup>5</sup> Lord et al. (2006). Autism from 2 to 9 years of age.

<sup>6</sup> Esler et al. (2015). The Autism Diagnostic Observation Schedule, Toddler Module: Standardized severity scores.

<sup>7</sup> Mazefsky et al. (2013). Comparability of DSM-IV and DSM-5 ASD research samples.

<sup>8</sup> de Bildt et al. (2013). How to use the ADI-R for classifying autism spectrum disorders?

# BlinkLab Outperforms FDA-approved Digital Peers

*We are leaders in the digital autism diagnostics space*

blinklab

cognoa

ETD  
EarliTec Diagnostics Inc.



**Sensitivity**

**84%**

**52%\***

**71%**



**Specificity**

**85%**

**19%\***

**81%**



**Smartphone-based**

**Yes**

**Yes**

**No**



**FDA approval**

**No - 510(k)**

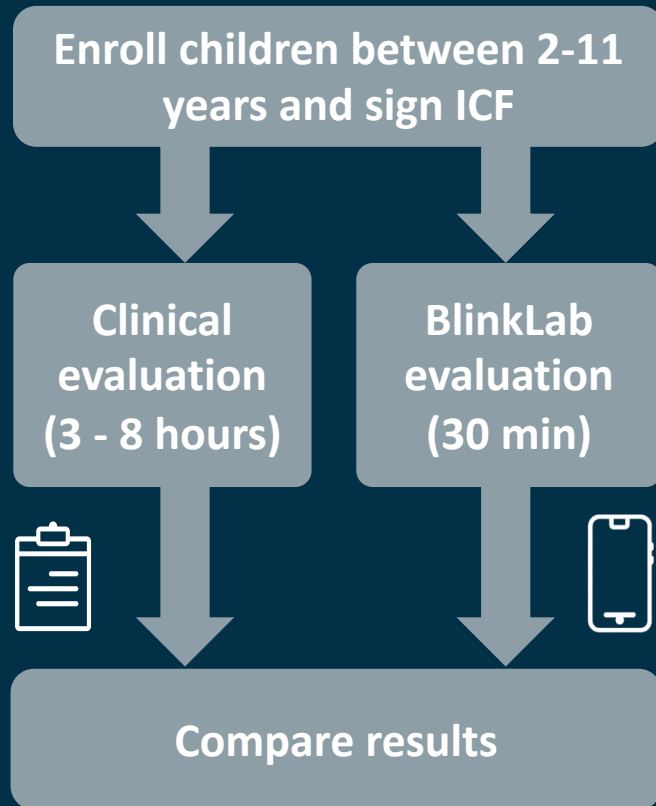
**Yes - De Novo**

**Yes - 510(k)**

\* Calculated over all study completers (Cognoa's device yielded indeterminate results in 68% of cases)

# Study Design and Timeline for 510(k) Regulatory Trial for Dx 1

*Prospective, multicenter in US, double-blinded, within-subject comparison study.*



*Main study: N = 264 children with autism  
and N = 264 children without autism.*

**Q4 2024 - CRO assigned**

- IRB approval for Pilot Study

- First pre-submission meeting with FDA

**Q1 2025 - Onboarded two US clinical sites for initial study: PriMED and NorthShore Pediatrics**

- Compliant with HIPAA and 21 CFR parts 11, 820

- Started data collection for Pilot Study

**Q2 2025 - IRB approval for main 528-patient Pivotal Study**

**Q3 2025 - Onboarding clinical and research sites for Pivotal Study**

**Q4 2025 - Second pre-submission meeting with FDA**

- Release of results from 485 patient Pilot Study

**Q1 2026 - Start Pivotal 510(k) Study**

**2H 2026 - Completion Pivotal Study and submission to FDA**

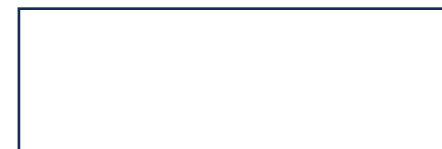
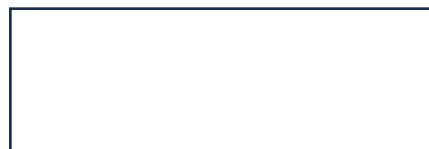
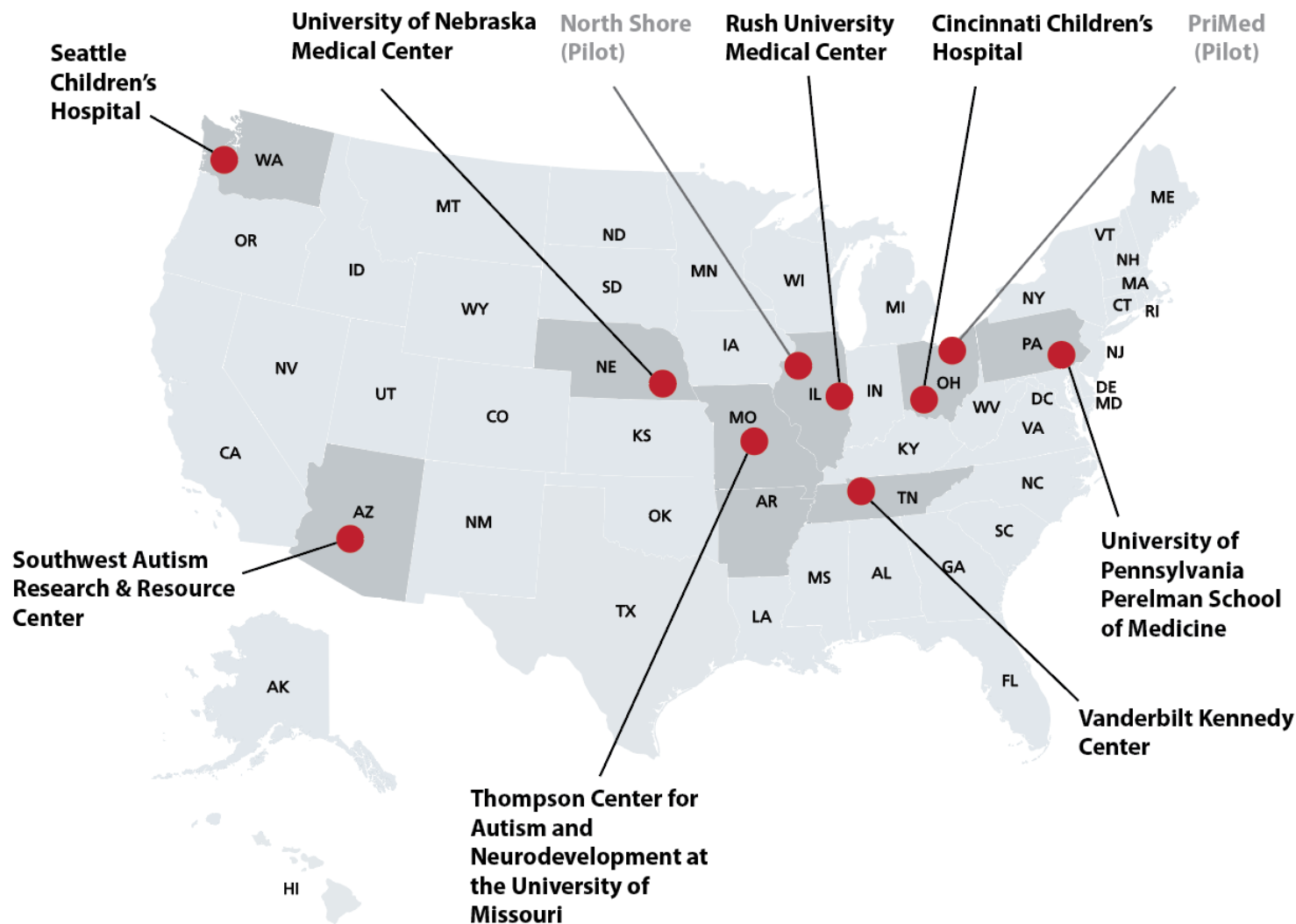
**Q1 2027 - Outcome from FDA 510(k)**

\* completed





# BlinkLab is onboarding Top-Tier hospitals in the US to participate in the 510(k) autism study



# We are experts in science, tech and commercialization



**Henk-Jan Boele, CEO**

MD, PhD, Entrepreneur and neuroscientist at Erasmus MC and Princeton University

*Fifteen years of experience in neurobehavioral testing with over 35 publications. Recipient of many prestigious awards. Team leader and inventor of BlinkLab.*



**Anton Uvarov, COO  
Executive director**

MBA, PhD, Biotechnology Analyst with Citibank

*Cofounder of two biotechnology companies, developed therapeutics for neurodegenerative disorders. Both successfully IPO and publicly traded.*



**Bas Koekkoek, CSO**

PhD, Assistant Professor of Neuroscience. Erasmus MC

*Twenty-six years of experience in neurobehavioral testing with over 55 publications in IEEE and the field of neuroscience. An innovator in heart and soul. Cofounder of Neurasmus BV.*



**Peter Boele, CTO**

MA, PhD candidate, Erasmus MC

*Born to code, with over 20 years of experience in software development, both as developer as well as executive.*



**Our mission is to use neuroscience to improve the daily life of families with autism.**

# We are backed up by an expert advisory board

## Company Chairman



**Brian Leedman**

*Experienced Chairman and co-founder of five ASX listed healthcare companies including digital healthcare company ResApp Health, acquired by Pfizer for \$180M in 2022.*



## Company Director



**Jane Morgan**

*Providing strategic investor and media relations services for over 16 years. Founder of JMM.*



## Company Director



**Richard Hopkins**

*Experienced bio-pharmaceutical executive with over 20 years in corporate leadership roles with public biotechnology companies.*



## Scientific advisor



**Prof. Samuel Wang**

*Professor of Neuroscience at Princeton University and author of 2 bestselling books.*



## Scientific advisor



**Prof. Chris De Zeeuw**

*Professor of Neuroscience at Erasmus MC and vice-director of the NIN (Netherlands Institute of Neuroscience).*



## Scientific advisor



**Prof. Javier Medina**

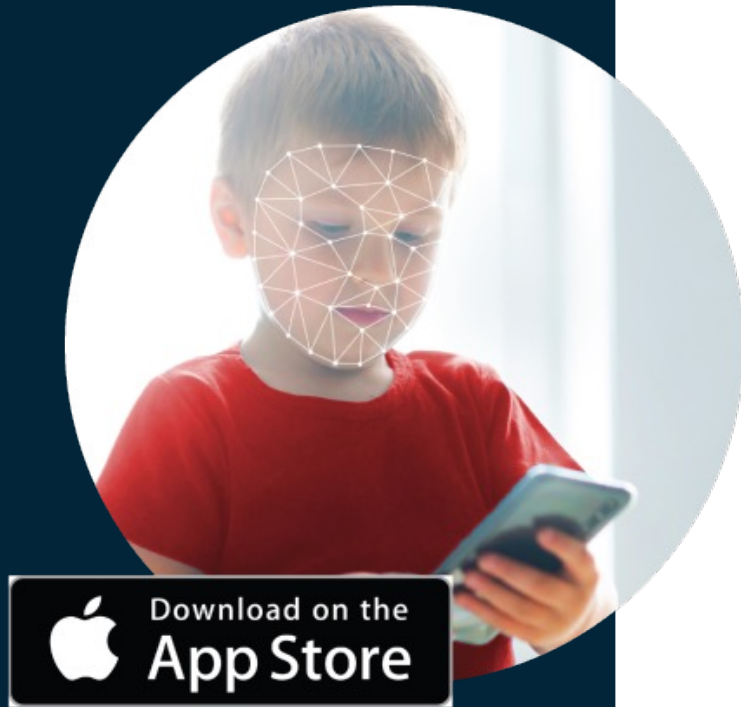
*Professor in neuroscience at Baylor College of Medicine in Houston.*



**World leading scientists, strategic and commercial advisors.**



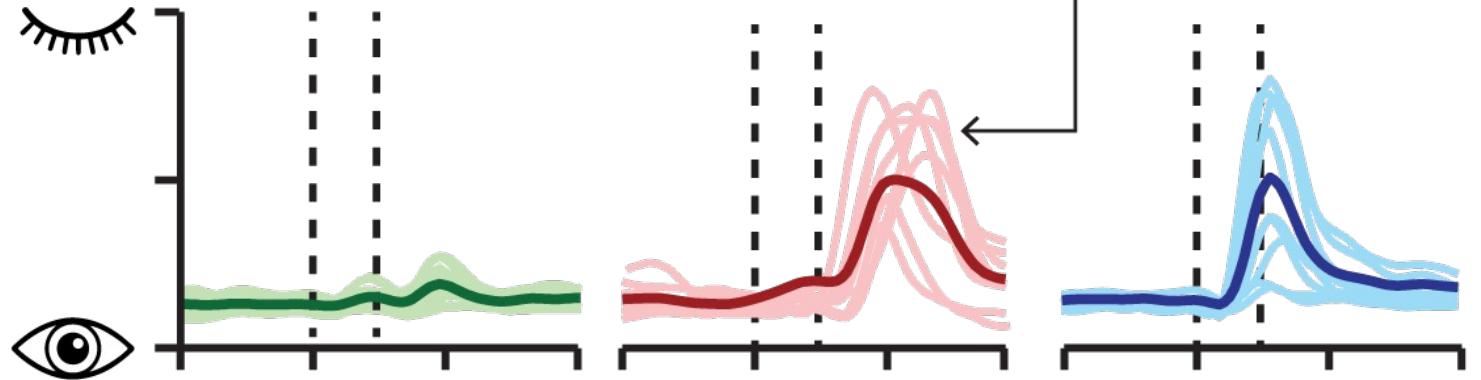
# Our AI technology detects autism and ADHD



Auditory cues  
delivered with  
BlinkLab app



Reflexive eye blinks  
recorded with  
BlinkLab app



Time (ms)

Control

Autism

ADHD

BlinkLab precisely measures **sensory sensitivity** in people with autism and ADHD.

# Catalysts and milestones for Dx 1 autism and Dx 2 ADHD models

*News pipeline on updates our regulatory studies on autism and ADHD and new partnerships*

Pilot Study

Pivotal Study

BlinkLab Dx 1 – Autism Model	Calendar Year
Release of Pilot Study Results	4Q 2025
Submit Pilot Study results for CE/MDR clearance	2Q 2026
Finish onboarding of US clinical sites for Pivotal Study	4Q 2025
Start Pivotal Study (i.e. first patient tested)	1Q 2026
Complete Pivotal Study (i.e. last patient tested)	3Q 2026
Submit Pivotal Study results to FDA	4Q 2026
<u>Milestone:</u> FDA responses on 510(k) clearance for Dx 1	1Q 2027

BlinkLab Dx 2 – ADHD model	Calendar Year
Complete European ADHD Study	1Q 2026
Submit ADHD study results for CE/MDR clearance	2Q 2026
Onboarding of US clinical trial sites for Pivotal Study	3Q 2026
Start Dx 2 Pivotal Study (i.e. first patient tested)	1Q 2027
Complete Dx 2 Pivotal Study (i.e. last patient tested)	3Q 2027
Submit Dx 2 Pivotal Study results to FDA	4Q 2027
<u>Milestone:</u> FDA responses on 510(k) clearance for Dx 2	1Q 2028

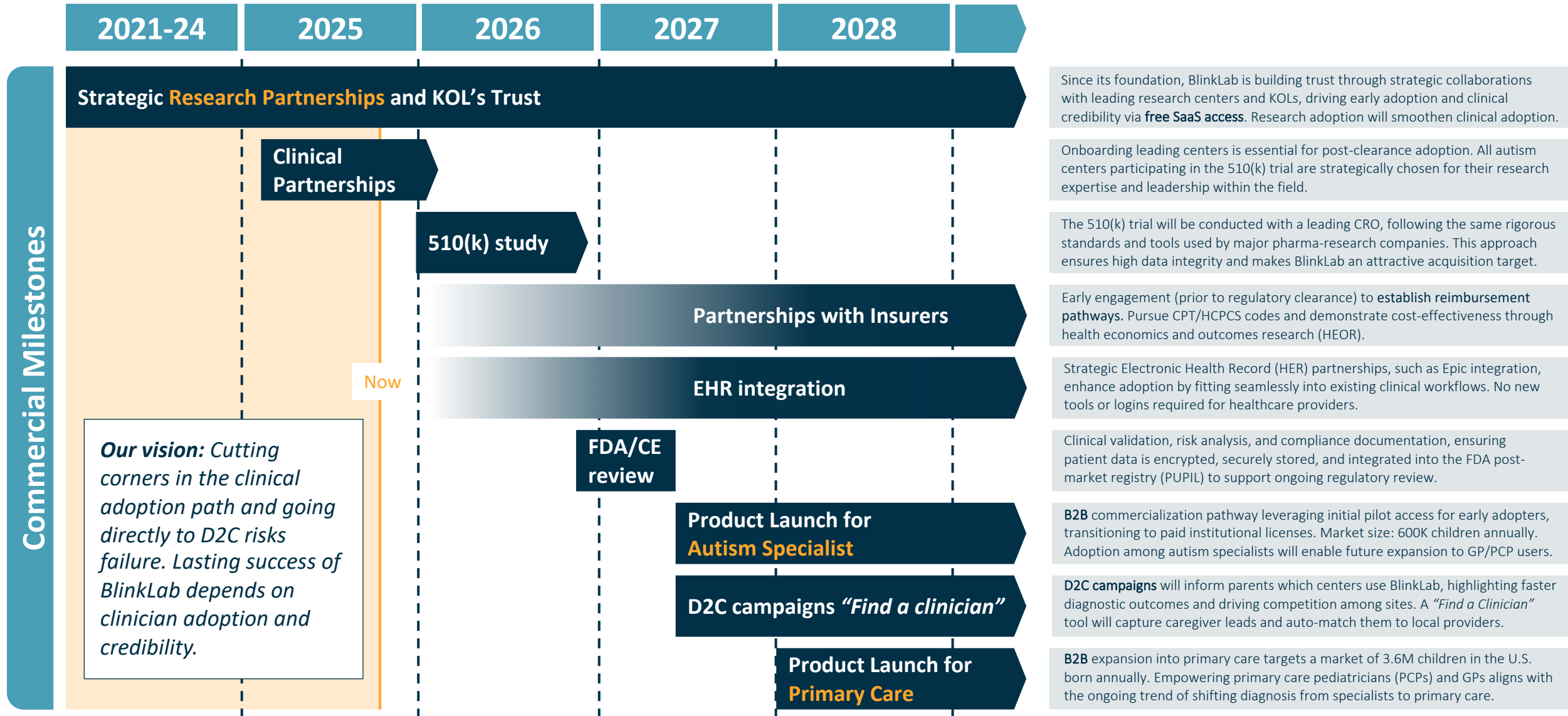
Note: This news pipeline excludes updates from the ongoing European Adult Autism Study, the Australian Monash Magnet Study, and the European Dementia Study.

blinklab

# BlinkLab's GTM strategy follows a traditional medical adoption curve

Research -> Autism Specialist -> Primary Care (GP/PCP)

\* The GTM plan shown on this slide applies to Dx 1 in the US market only. The GTM approach for Dx 2 and/or non-US markets will follow a similar structure.



# Intellectual property

**Our patents prohibit other parties to conduct neurometric testing using mobile devices.**



BlinkLab has consistently prioritized the development and protection of its intellectual property since its seed funding round in August 2021. Our capital investments sourced from seed investors, government funding, and industry sponsorships - have been primarily utilized for IP and software development.



We are represented by the US-based law firm, Meagher Emanuel Laks Goldberg & Liao, LLP, which ensures our IP protection. We have filed National Stage Applications for 2020-2021 patents across various jurisdictions including the United States, Japan, Canada, Australia, Korea, and the European Patent Office (EPO) in March 2023.



Our portfolio comprises patents filed both by Princeton University, under an exclusive license agreement, and BlinkLab itself. These patents range from systems for neurobehavioral testing to methods for measuring emotional engagement, all of which firmly establish our innovation and leadership in the field.



## **Patents filed by Princeton University, with an exclusive license agreement in place between Princeton University and BlinkLab:**

- PCT application number PCT/US2021/058698 Filed November 10, 2021, entitled “System and Method for Remote Neurobehavioral Testing”
- US patent application number 18/036,009 Filed May 9, 2023, entitled “System and Method for Remote Neurobehavioral Testing”
- European patent application number 21892692.1 Filed March 31, 2023, entitled “System and Method for Remote Neurobehavioral Testing”
- Japanese patent application number 2023-528017 Filed May 10, 2023, entitled “System and Method for Remote Neurobehavioral Testing”
- Canadian patent application number 3,195,596 Filed April 13, 2023, entitled “System and Method for Remote Neurobehavioral Testing”
- Korean patent application number 10-2023-7018839 Filed June 2, 2023, entitled “System and Method for Remote Neurobehavioral Testing”
- Australian patent application number 2021378273 Filed May 23, 2023, entitled “System and Method for Remote Neurobehavioral Testing”



## **Patents filed by BlinkLab:**

- US Provisional patent application number 63/218,607 Filed on November 30, 2022, entitled “Psychopharmacological System and Method Using Eyelid Tracking”
- US Provisional patent application number 63/460,451 Filed on April 19, 2023, entitled “Method And System For Measuring Emotional Engagement”
- US Provisional patent application number 63/548,542 Filed on February 1, 2024, entitled “System And method For Detecting Neurological Condition”



# Other Applications for BlinkLab and Trials Underway

## ➤ European ADHD Study

- **Collaborator:** Mental Care Group
- **Goal:** Develop BlinkLab Dx 2 - ADHD Model
- **Status:** Recruiting - 300 children will have completed all testing in mid-Q4



ASX Announcement, 30th Jul 2024;  
[BlinkLab](#) Partners with Mental Care Group in Europe

## ➤ European Dementia Study

- **Collaborator:** Erasmus University Medical Center
- **Goal:** Early neurometric markers for frontotemporal and Alzheimer's dementia
- **Status:** Recruiting presymptomatic and symptomatic participants



ASX Announcement, 5th Jun 2024;  
[BlinkLab](#) signs Clinical Study Partnership with Erasmus MC

## ➤ Australian MAGNET Study

- **Collaborator:** Monash University
- **Goal:** Genotyping and deep behavioral phenotyping of autism and ADHD
- **Status:** Recruiting in the 1000-family study



ASX Announcement, 13th Nov 2024;  
[BB1](#) to Participate in Monash Uni Autism/ADHD MAGNET Project

## ➤ European Adult Autism Study

- **Collaborator:** Amsterdam University
- **Goal:** Exploring BlinkLab neurometrics in adults with autism
- **Status:** Recruiting in 200-participant study



ASX Announcement, 19th Mar 2025;  
[Blinklab](#) Expands Autism Diagnostics into Adults

# blinklab *ASX:BB1*

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