PRESS RELEASE

For immediate release

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LuxAI, Luxembourg Institute of Health, and University of Birmingham launch the first large-scale study of at-home, robot-led early development support for autistic children with QTrobot

LuxAI, together with the Luxembourg Institute of Health (LIH) and the University of Birmingham (UK), has launched the world's first large-scale, longitudinal scientific study exploring the use of a social robot-led early development programme at home for young autistic children, delivered through QTrobot. The study will involve 69 families and is expected to conclude by the end of 2026.

The study, funded jointly by the Luxembourg National Research Fund and the Luxembourg Ministry of the Economy, will evaluate QTrobot, LuxAI's humanoid social robot, as a tool to support autistic children aged 2.5–4.5 years in key developmental areas such as communication and language, social skills and learning. QTrobot delivers interactive learning activities through engaging games and guided exercises, adapting to each child's pace while providing families with structured support tools they can use at home.

This international collaboration marks a major milestone in early-years support for autistic children and digital health innovation, evaluating how socially assistive robots can enhance the accessibility and quality of early developmental support for both children and their parents.

"*This is a landmark study for both early autism research and technology-supported learning*," said Dr Manon Gantenbein, Head of the Clinical and Epidemiological Investigation Center at the LIH. "*So far, technologies like robots have shown very promising results in short-term, small-scale studies, but their long-term effectiveness and usability have never been systematically examined. For the first time, we are conducting a large-scale, long-term study to rigorously assess the impact of a robot-led programme designed to empower both children and their families through home-based support*."

Families in the West Midlands, UK, will participate in the study over a 10-month period, with researchers assessing child development and parental self-efficacy to understand how robot-assisted programmes can strengthen early developmental outcomes.

"*Access to high-quality early support is still limited for many families across the world*," noted Prof Karen Guldberg, Head of the School of Education at the University of Birmingham. "*By combining research excellence and technology, this study could pave the way for engaging early support for autistic children and their families.*"

"*We are proud to see QTrobot and its early-years development programme at the heart of such pioneering research*," added Dr Aida Nazari, COO of LuxAI. "*This study represents a crucial step in understanding how robots can deliver consistent, personalised support in the child's own environment, where they are most comfortable and where families often need additional support. By bringing 69 families through this 10-month journey, we will gain invaluable insights into real-world impact*."

Funding and collaborations

The project is a public-private partnership funded by the Luxembourg National Research Fund (FNR) and the Ministry of Economy, as part of the Health Tech programme.

About the Partners

LuxAI, *with offices in New York, London and Luxembourg, is a company specialising in socially assistive robotics and AI-powered solutions for human–robot interaction. Its flagship product, QTrobot, is used globally to promote health, wellbeing and learning in a variety of domains, from early-years development to geriatric health. QTrobot for Special Needs Education, in particular, is used by schools across the world to enhance the learning opportunities of autistic children and children with other special educational needs.*

The Luxembourg Institute of Health (LIH) *is a public biomedical research organisation focused on precision health and invested in becoming a leading reference in Europe for the translation of scientific excellence into meaningful benefits for patients.*

The LIH places the patient at the heart of all its activities, driven by a collective obligation towards society to use knowledge and technology arising from research on patient derived data to have a direct impact on people's health. Its dedicated teams of multidisciplinary researchers strive for excellence, generating relevant knowledge linked to immune related diseases and cancer.

The institute embraces collaborations, disruptive technology and process innovation as unique opportunities to improve the application of diagnostics and therapeutics with the long-term goal of preventing disease.

The University of Birmingham *is a leading UK university with global expertise in autism, education and neurodevelopmental research through The Autism Centre for Education and Research. The University of Birmingham is ranked amongst the world's top 100 institutions. Its work brings people from across the world to Birmingham, including researchers and teachers, and more than 8,000 international students from over 150 countries.*

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