



THE UNIVERSITY
of EDINBURGH

NEW NEURII RESEARCH COLLABORATION BETWEEN EISAI, GATES VENTURES, HEALTH DATA RESEARCH UK, LIFEARC AND THE UNIVERSITY OF EDINBURGH TO DEVELOP DIGITAL SOLUTIONS FOR DEMENTIA IS ANNOUNCED

- *New research collaboration brings together world-leading institutions' collective expertise in therapeutics, technology, health data, technology commercialisation and advanced analytics/data science in neurology.*
- *Two-year pilot provides a launch pad for translating scientific prototypes into practical solutions that demonstrate real-world impact.*
- *NEURii collaboration builds on Eisai's extensive experience in delivering innovative treatments in neurology and supports ongoing contributions to the global digital health ecosystem.*

TOKYO, HATFIELD, SEATTLE, LONDON, and EDINBURGH, 29 June, 2023 – Eisai, Gates Ventures, Health Data Research UK (HDR UK), LifeArc and The University of Edinburgh announced today a new two-year collaborative research agreement. The collaboration, named *NEURii* is a unique pioneering partnership that creates a powerhouse collaboration of collective expertise in therapeutics, technology development and commercialization, health data management and advanced analytics/data science to predict, protect and promote brain health.

NEURii will focus its initial efforts to develop data and digital solutions to complement approved treatment options for patients and solve issues related to the prediction, prevention, management, and treatment of dementia related disorders.

This groundbreaking collaboration will use high-quality individual data, Artificial Intelligence (AI), and Machine Learning (ML) to deliver patient-focused digital health solutions by developing initial pilot projects originated in highly recognized UK academic centres. These projects have been selected on the basis of their potential to make a meaningful difference to patients' lives while maintaining data security and public trust. By combining diverse digital biomarkers that can be acquired non-invasively in real world clinical and non-clinical settings (e.g., speech from conversation) with the high-quality and abundant medical data accumulated in the UK, and analyzing them with tailored AI algorithms, *NEURii* will create innovative digital solutions. These will be deployed in the detection, monitoring and treatment of dementia patients in order to improve their lives as well as minimizing the impact of the disease burden on their carers and families.

This initial two-year pilot establishes a first-in-class launch pad underpinned by an innovative business model and scalable prototype for translating scientific prototypes that will enhance and improve public health demonstrating real world impact. It is envisaged that *NEURii* partners will explore further opportunities to scale up the program developing digital health solutions worldwide.

Dr. Teiji Kimura, Ph.D., Academia and Industry Alliance Officer, Deep Human Biology Learning (DHBL) Office of Eisai, commented, "Dementia is one of the major social and medical issues in an aging society, and Eisai's mission is to contribute to solving these issues. We aim to create new digital solutions that will contribute to solving the challenges of dementia by combining the UK's leadership in this field with our experience and track record of continuously creating innovative treatments in the field of dementia whilst staying true to our *human health care* concept of giving first thought to patients and the people in the daily living domain."

It is estimated that more than 55 million are currently living with dementia in the world, and nearly one million people in the UK, and this number is expected to grow rapidly.^{1,2} As well as having a significant impact on the lives of patients and those who care for them (52% of the UK public knows someone who has been diagnosed with a form of dementia), these conditions place significant pressure on health and

social care systems. Providing data-driven solutions that complement existing treatments could help to improve earlier detection and diagnosis, evidence-based treatment decision-making, monitoring of disease progression and maintenance of quality of life.

“AI and other advanced technologies are beginning to play a powerful role in medical research,” said Dr. Niranjana Bose, Managing Director of Health & Life Sciences at Gates Ventures. “I’m excited about how the *NEURii* collaboration will apply these tools to diagnostics research and drug discovery, and contribute to breakthroughs that can improve life for millions of people suffering with dementia and dementia-related illnesses.”

“Identifying ways to prevent dementia and neurodegenerative disease is a key part of our multi-million-pound neurodegeneration program’ said Paul Wright, MND Translational Challenge Lead at LifeArc “This collaboration is one of many new innovative projects we are involved in to improve the diagnosis of dementia and a positive step towards predicting those who may develop the disease.”

The UK is a leader in digital technology investment and research across areas such as genomics, health data science, AI and ML, with rich and diverse health-related data. *NEURii*’s model will enable the identification of pioneering data and digital science, the mentoring of talented scientists and the translation of health prototypes into practical and accessible products. By bringing together the expertise and capabilities of the *NEURii* collaborators, it is hoped that the novel approach will provide an exciting launch-pad for new transformational digital products that can contribute to solving the ongoing challenges of dementia and neurodegenerative conditions.

Professor Andrew Morris, Director of HDR UK, said: “Almost one million people in the UK are living with dementia. This new public-private partnership aims to gain a deeper understanding of the disease through trustworthy use of large datasets of anonymised health data in secure environments. We will take forward a set of pilot projects and engage with the public. Our aim is to produce new data-driven products that will benefit patients and their families in detecting dementia, predicting its progress and better managing the disease.”

NEURii academic lead Professor Siddharthan Chandran, of the University of Edinburgh, said: “The University of Edinburgh is delighted to be part of this ambitious cross-sector digital partnership that has, as an explicit goal, the creation of low cost and globally scalable digital tools to predict and monitor dementia.”

Outputs from the *NEURii* collaboration will be shared quarterly internally and released externally when appropriate.

¹ World Health Organization. Fact sheets, Dementia

<https://www.who.int/news-room/fact-sheets/detail/dementia>

² Alzheimer’s Research UK. Dementia Statistics Hub. Number of people in the UK. 2022. Available at:

<https://dementiastatistics.org/about-dementia/prevalence-and-incidence/>

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[Notes to editors]

1. About *NEURii*

NEURii is a collaborative venture formed by Eisai, Gates Ventures, HDR UK, LifeArc and The University of Edinburgh. The partnership's aim is to translate real-world data and digital science into solutions and products that predict, prevent and manage the treatment of dementia to help people live longer and better lives worldwide *NEURii* will operate within a strict governance framework and FAIR data principles (data which meet principles of findability, accessibility, interoperability, and reusability).

2. About Eisai

Eisai's Corporate Concept is "to give first thought to patients and people in the daily living domain, and to increase the benefits that health care provides." Under this Concept (also known as *human health care (hhc)* Concept), we aim to effectively achieve social good in the form of relieving anxiety over health and reducing health disparities. With a global network of R&D facilities, manufacturing sites and marketing subsidiaries, we strive to create and deliver innovative products to target diseases with high unmet medical needs, with a particular focus in our strategic areas of Neurology and Oncology.

In addition, our continued commitment to the elimination of neglected tropical diseases (NTDs), which is a target (3.3) of the United Nations Sustainable Development Goals (SDGs), is demonstrated by our work on various activities together with global partners.

For more information about Eisai, please visit www.eisai.com (for global headquarters: Eisai Co., Ltd.), and connect with us on [Twitter](#), [LinkedIn](#) and [Facebook](#).

For more information about Eisai in the EMEA region, please visit www.eisai.eu.

3. About Gates Ventures

Gates Ventures is the private office of Bill Gates. Gates Ventures' programmatic investments in the Alzheimer's field include the AD Diagnostics Accelerator, Dementia Discovery Fund (DDF), AD Data Initiative and the European Platform for Neurodegenerative Diseases (EPND).

4. About Health Data Research UK

Health Data Research UK is the national institute for health data with a mission to unite the UK's health data to enable discoveries that improve people's lives. It is a charity funded by UK Research and Innovation, the Department of Health and Social Care in England and equivalents in Northern Ireland, Wales and Scotland, and leading medical research charities.

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5. About LifeArc

LifeArc is a self-funded, non-profit medical research organisation. We take science ideas out of the lab and help turn them into medical breakthroughs that can be life-changing for patients. We have been doing this for more than 25 years and our work has resulted in five licensed medicines and a diagnostic for antibiotic resistance.

Our teams are experts in drug and diagnostics discovery, technology transfer, and intellectual property. Our work is in translational science – bridging the gap between academic research and

clinical development, providing funding, research and expert knowledge, all with a clear and unwavering commitment to having a positive impact on patient lives.

LifeArc is committed to spending £1.3 billion by 2030 in areas of high unmet medical need.

www.lifearc.org

6. About the University of Edinburgh

The University of Edinburgh is a global university, rooted in Scotland. We are globally recognised for our research, development and innovation and we have provided world-class teaching to our students for more than 425 years. We are the largest university in Scotland, with more than 41,000 students and 15,000 staff. We are a founding member of the UK's Russell Group of leading research universities and a member of the League of European Research Universities. Edinburgh Innovations is the University of Edinburgh's commercialisation service. We bring University of Edinburgh research to industry, working to identify ideas with value, and facilitating the process of bringing them to life in real-world applications. We make ideas work for a better world.

Find out more on our [website](#)