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Gamers help make Alzheimer's discovery

Stall Catchers, showcased at the British Science Festival 2017, provides clues to high fat diet & Alzheimer's link

Results from online game may soon shed light on a possible relationship between high fat diets and reduced brain blood flow in Alzheimer's Disease (AD).

Stall Catchers - an online game from the EyesOnALZ project, is at the British Science Festival 2017 to announce it's first crowd-generated research finding. By logging onto stallcatchers.com, volunteer gamers from all over the world analyse real AD research data.

The EyesOnALZ project, led by the Human Computation Institute, launched Stall Catchers almost a year ago to crowdsource Alzheimer's research for the first time.

This research could potentially lead to the first-ever effective Alzheimer's treatment, but more questions need to be answered first. By gathering the input of thousands of Stall Catchers players the needed research could be completed in just a few years instead of decades.

The biomedical research accelerated by Stall Catchers is conducted at the Schaffer-Nishimura lab at Cornell University. This work focuses on a well-known but poorly understood link between reduced blood flow in the brain and Alzheimer's disease. Researchers discovered that clogged blood vessels, called "stalls", could be the likely culprits behind the development and progression of AD. By reversing these stalls, the researchers have restored cognitive function and reduced other AD symptoms in mice.

Dr Pietro Michelucci, EyesOnALZ principle investigator, said: "Some of our best players are 80-something grandparents and 8-year-old grandchildren. We designed the game so that even early stage Alzheimer's patients can contribute directly to their own potential treatment,"

Citizen scientists across the globe have already helped analyse several research datasets in Stall Catchers.

“At first we focused on getting high quality research data out of the game play and the most efficient way of doing so. Using our latest methods, we now get three times as much value from each minute of volunteer time.”

The last two datasets in Stall Catchers have been entirely up to the crowd. The first of those is now fully analysed and reveals that, unlike many physiological aspects of AD, stalled blood vessels do not seem more prevalent near the plaques characteristically found in the brains of Alzheimer's patients. This result will be announced by the project’s team at the British Science Festival this year.

The current dataset examines the possible role of a high fat diet on the development of stalls in the brain in AD. Anyone who plays Stall Catchers during the Festival is helping to answer the high fat diet question. Festival goers will be able to try Stall Catchers and chat with the team on Friday, 8 September, from 17.00 at the Brighton Palace Pier.

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For more details or to arrange interviews with speakers, please contact:

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Notes for editors

1. About Human Computation Institute

Human Computation Institute (HCI), founded in 2014, is a non-profit innovation centre dedicated to advancing the science of crowd-powered systems for the betterment of humanity. For more information visit

http://humancomputation.org.

EyesOnALZ is a citizen science project that crowdsources Alzheimer's disease research by turning traditional laboratory data analysis into an online game that anyone can play. EyesOnALZ was created by Human Computation Institute in partnership with Cornell University, University of California at Berkeley, Princeton University, and SciStarter. It is

funded by the BrightFocus Foundation, a non-profit organization that supports research and promotes awareness to end Alzheimer's disease, macular degeneration and glaucoma.

2. About the British Science Festival

The British Science Festival is one of Europe's largest science festivals and regularly attracts hundreds of the UK's top scientists and speakers to discuss the latest developments in science with the public. Over 10,000 visitors attend the talks, discussions and workshops. Registration is free for journalists and gets you access to hundreds of events. The Festival takes place at a different location each year. The 2017 Festival will take place from 5 – 9 September, co-hosted by the Universities of Brighton and Sussex. For further information, visit www.britishsciencefestival.org @BritishSciFest #BSF17

3. About the University of Brighton

With over 20,700 students studying across five campuses in Brighton, Eastbourne and Hastings the University has a major presence in Brighton and Hove and more widely across Sussex. The University's wide-ranging research has been assessed as world-leading in a number of areas, including Computer Sciences and Infomatics and Sports and Exercise Science and as internationally excellent in the areas of Engineering and Earth Sciences.

In addition to its internationally renowned teaching, practice and research in the arts and design it is also one of the UK's leading teacher training universities and a major Higher Education provider for healthcare and engineering professions. In partnership with the University of Sussex and local NHS the University of Brighton supports the Brighton and Sussex Medical School which is rated by students as the best in the UK.

4. About the University of Sussex

The University of Sussex is a leading higher education and research institution near Brighton, in the south of England with approximately 14,000 students, of which over a third are postgraduates. Creative thinking, pedagogic diversity, intellectual challenge and interdisciplinarity have always been fundamental to a Sussex education.

The University delivers teaching and learning programmes that are informed by current research are attractive to students from all socioeconomic and cultural backgrounds, and which deliver skills for life. Sussex is a leading research university, as reflected in the 2014 Research Excellence Framework (REF). Over 75 per cent of research activity at Sussex is

categorised as world leading (4*) or internationally excellent (3*) in terms of originality, significance and rigour.

5. About the British Science Association

The British Science Association (BSA) believes that science should be part of – rather than set apart from – society and culture, and is owned by the wider community. Our programmes encourage people of all ages and backgrounds to engage with science, become ambassadors for science, and ultimately to be empowered to challenge and influence British science - whether they work in science or not.

Established in 1831, the BSA is a registered charity that organises major initiatives across the UK, including British Science Week, the annual British Science Festival, regional and local events, the CREST Awards and other programmes for young people in schools and colleges.

The BSA also organises specific activities for professional science communicators, including a specialist conference and training. For more information, please visit www.britishscienceassociation.org