Frontotemporal dementia targeted in new drug discovery project from the Dementia Consortium

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The Dementia Consortium, a unique charity-private partnership between Alzheimer’s Research UK, MRC Technology and the pharmaceutical companies Eisai and Lilly, has invested £305,000 in a new project to identify drugs for frontotemporal dementia (FTD) and Amyotrophic Lateral Sclerosis (ALS). A team at the International Centre for Genetic Engineering and Biotechnology (ICGEB) in Trieste, Italy will join forces with London-based MRC Technology to take on the project, with funding provided by Alzheimer’s Research UK.

While people with ALS (also known as motor neurone disease) and FTD experience different symptoms, both diseases are associated with the same biological processes. Clumps of a protein called TDP-43 are a hallmark feature of both diseases, wreaking havoc on nerve cell communication and eventually causing nerve cell death. In the case of FTD – the biggest cause of dementia in those under 50 – these clumps build-up in the part of the brain involved in regulating behaviour, personality and emotion, whereas in ALS, damage is caused to parts of the brain that control movement. Sadly, no treatments exist to halt the spread of damage in these diseases. MRC Technology and the
International Centre for Genetic Engineering and Biotechnology in Trieste have set out to tackle this lack of treatments and aim to identify tools to clear the toxic protein clumps, forming the basis of future much-needed drug development programmes.

Dr Marco Baralle, Group Leader in Biotechnology Development at the ICGEB, commented:

“Our initial research into TDP-43 has showed promising results, with some compounds able to enhance aggregate clearance by more than 50% and fully restore TDP 43 function. This funding will allow us to progress our research in collaboration with MRC Technology to the next stage.”

Dr Justin Bryans, Director of Drug Discovery at MRC Technology said: “Combining the experience of ICGEB and Alzheimer’s Research UK together with MRC Technology’s expertise in drug discovery and translation, means we can progress promising science from academia towards effective new treatments for patients.”

Dr Eric Karran, Director of Research at Alzheimer’s Research UK, added: “FTD is a rare form of dementia, but one that disproportionately impacts people under 65. Typical symptoms include behavioural and personality changes, as well as a lack of social awareness. Managing these symptoms can be incredibly challenging and we’ve gone too long without a therapy that can halt nerve cell damage in the brain. By combining expertise through the Dementia Consortium, we hope to accelerate progress from academic laboratories across the world into much sought-after treatments in the clinic.”
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