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Korea establishes novel strategy to tackle Huntington's diseaseÃ¢â?¬â?¹

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A platform to take on the Huntington's disease via an innovative approach



Through an international joint research effort involving ProQR Therapeutics of the Netherlands, Université Grenoble Alpes of France, and KTH Royal Institute of Technology of Sweden, Professor Ji-Soon Song's research team in the Department of Biological Sciences and KAIST Institute for BioCentury of KAIST, South Korea have established a noble strategy to treat Huntington's disease.

The new work showed that the protein converted from disease form to its disease-free form maintains its original function, providing new roadblocks to approach Huntington’s disease, a rare, inherited disease that causes the progressive breakdown (degeneration) of nerve cells in the brain.

It is caused by a mutation in a protein called ‘huntingtin’, which adds a distinctive feature of an expanded stretch of glutamine amino acids called polyglutamine to the protein. The patients would suffer a decade of regression before death, and, thus far, there is no known cure for the disease.

As huntingtin protein is required for the development and normal function of the brain, it is critical to specifically eliminate the disease-causing protein while maintaining the ones that are still normally functioning. This new study is intended to fuel innovate strategies to tackle Huntington’s disease without altering the essential function of huntingtin.