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New breakthrough in dementia research

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Singapore: Researchers at the Taipei-based Academia Sinica announced that they have discovered a new molecule that aids in screening, early detection of dementia and other diseases caused by nerve cell degeneration.

Reports suggest that the research published in the journal, Nature Communications, offers new hope for better diagnosis and treatment for dementia.

The team led by Mr Chen Yun-ru, assistant research fellow at Academia Sinica's Genomics Research Center said that neurotoxic TDP-43 amyloid oligomers, a type of soluble aggregates, are a likely direct cause of frontotemporal lobar dementia, the second most prevalent cortical dementia, occurring before the age of 65.

Mr Yun-ru further said, "The amyloids may also facilitate deterioration in Alzheimer's and further lead to amyotrophic lateral sclerosis or the ALS disease. Leading to paralysis and death eventually, ALS is characterized by progressive loss of motor neurons, weakness and muscular wasting."

He added that using a specific antibody, the team proved that full-length TDP-43 readily formed spherical oligomers and shared common properties of amyloids which can then be detected through screening techniques.

Mr Yun-ru stressed that the research will offer a new direction to treatment and early screening of dementia and other neurodegenerative disorders.