Medical Xpress

Alzheimer's leaves clues in blood

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Alzheimer researchers in Spain have taken a step closer to finding a blood test to help in the diagnosis of Alzheimer's disease.

With approximately 75% of the estimated 36 million Alzheimer's sufferers worldwide yet to receive a reliable diagnosis, the potential impact on the lives of possible sufferers, present and future, could be huge.

Alzheimer's disease is a neurodegenerative disease most frequently affecting the elderly. The most commonly associated symptom is a progressive loss of memory to the stage in which the patient is completely dependent on caregivers for their daily needs. There is a large amount of research supporting the theory that a group of peptides called beta amyloid (Aβ), which are found naturally in the body, are major contributors to Alzheimer's disease.

Through a process, so far unclear to science, there is a build up of these peptides in the brain that over a period of years cause memory complaints and other symptoms associated with the disease.

Professor Manuel Sarasa, CSO and founder of Spanish research company Araclon Biotech, and his team have been perfecting blood tests "ABtest40" and "ABtest42" to measure the very small amounts of these peptides in the blood.

"The study has shown that our tests for Aβ; in blood find a high level of association between the peptide levels and the disease when comparing

healthy people and people with mild cognitive impairment" ((MCI) the earliest noticeable stages of memory loss.)

"By measuring three different levels in blood, free in plasma, bound to plasma components and bound to blood cells, for two of the most significant peptides, Aβ40 and Aβ42, then comparing the ratios of those levels to established diagnoses methods, we have been able to consistently show a relationship between Aβ; levels and the disease," he says.

"This means that we, and by 'we' I mean Alzheimer's' researchers in general, are that much closer to having a reliable, minimally invasive biomarker for Alzheimer's disease," Professor Sarasa says.

"The importance of this is that studies could recruit earlier and at much less expense. Interventional therapies can be tested in earlier stages of the disease and once an effective therapy is found, this type of test will be well suited to population screening in the public health sector."

The results of this work are being published in the *Journal of Alzheimer's Disease* 36(3) in July.

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