



DEMENTIA FUNDERS NETWORK

## Dementia research news summary -February 2026

### Blood test may predict when Alzheimer's symptoms will begin

There is growing research into what information blood tests can reveal about Alzheimer's disease. Last month, a study was announced that aimed to improve early diagnosis through blood-based biomarkers. This month, researchers have reported a model that can estimate when Alzheimer's symptoms are likely to begin.

The predictive model is based on a single blood biomarker, phosphorylated tau 217 (**pTau217**). By analysing the plasma pTau217 levels in more than 600 older adults, researchers found that they could estimate the age at which Alzheimer's symptoms would develop with an accuracy of about three to four years.

They also observed that a person's age influences disease progression, with older adults tending to develop symptoms more quickly after pTau217 levels are elevated. For example, individuals whose pTau217 levels increased at age 60 developed symptoms after roughly 20 years, whereas those whose levels rose at 80 typically developed symptoms around 11 years after.

This test is not currently ready for routine clinical use, but the team has made their code publicly available in the hope that it will help researchers design faster and more targeted clinical trials.

### Sound therapy shows promise in aged primates

Researchers at the Kunming Institute of Zoology have provided the first evidence in non-human primates that 40-Hz auditory stimulation may influence amyloid biology in ageing brains. In the study, nine elderly rhesus macaques received one hour of 40-Hz auditory stimulation daily for seven consecutive days.

Following treatment, levels of A $\beta$ 42 and A $\beta$ 40 in the cerebrospinal fluid increased by over 200%. This suggests an increase in amyloid- $\beta$  moving from brain tissue into the cerebrospinal fluid, a process associated with plaque clearance in the brain. These elevated levels persisted for more than five weeks after stimulation ended, which is an effect not previously observed in rodent studies.

Unlike current antibody anti-amyloid therapies, which have risks like brain swelling and haemorrhages, 40-Hz auditory stimulation is low-cost and non-invasive. These findings are

preliminary and based on a small sample but may warrant further investigation as a complementary treatment approach.

## Quick fire new research

- Women show higher tau levels than men when amyloid levels are elevated
  - A study has found that when amyloid- $\beta$  levels are high in both sexes, women have significantly higher levels of pTau217
  - This suggests that after amyloid builds up, tau accumulates more rapidly in women, potentially increasing vulnerability to early disease progression
  - However, before symptoms appear, the level of amyloid- $\beta$  plaques is similar for both sexes
  - This may help to explain why women are disproportionately affected by Alzheimer's, and lead to further research into whether biological sex plays a role in the underlying disease mechanism

Source: *JAMA Neurology*