

Cold sore virus is linked to Alzheimer's

By Sarah Knapton SCIENCE EDITOR

ALZHEIMER'S disease could be caused by viruses such as herpes, a group of renowned dementia experts have warned, as they call for an urgent investigation into the link.

The worldwide team of 31 senior scientists and clinicians, which include specialists from Oxford, Cambridge, Edinburgh and Manchester Universities and Imperial College, have written an editorial which suggests that microbes are the major cause of dementia.

The herpes virus - the type which

causes cold sores - and chlamydia bacteria are named as the major culprits, as well as a type of corkscrew-shaped bacteria called spirochaete.

Currently most scientists are trying to find treatments that prevent the build-up of sticky amyloid plaques and misfolded tau proteins in the brain which prevent neurons from communicating with each other, leading to memory loss and cognitive decline.

But in an editorial in *The Journal of Alzheimer's Disease*, it is suggested that it is viral or bacterial infections that trigger the plaque build-up in the first

place. Targeting them specifically with antimicrobial drugs could halt dementia.

Prof Douglas Kell, of the University of Manchester's School of Chemistry, said: "We are saying there is incontrovertible evidence that Alzheimer's Disease has a dormant microbial component. We can't keep ignoring all of the evidence."

There are currently 850,000 people living with dementia in Britain which is expected to rise to one million by 2025 and two million by 2050. But

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despite 412 drugs trials taking place between 2002 and 2012, nothing has been shown to combat the disease.

The authors say that viruses and bacteria are common in the brains of elderly people, and although they are usually dormant, they can "wake up" after stress or if the immune system is compromised. Around two-thirds of people will acquire the herpes virus at some point in their lives, and many will not realise they have it.

The virus is known to damage the central nervous system, and the limbic system in the brain which regulates mood and is associated with mental decline and personality changes.

They also point to the fact that a gene mutation - APOE e4 - which makes one in five people more susceptible to Alzheimer's disease, also raises their

susceptibility to infectious disease. Viral infections in the brain are already known to cause symptoms similar to Alzheimer's and the experts say the link has been "neglected" for too long.

They write: "We propose that further research on the role of infectious agents in Alzheimer's disease causation, including prospective trials of antimicrobial therapy, is now justified."

Last year, researchers found that the 'seeds' of Alzheimer's could be passed through blood transfusions and medical accidents.

◆ Cheap diabetes pills could significantly reduce the risk of breast cancer, research suggests. Women using the 10p-a-day metformin tablets, or their diet, to treat diabetes were 40 per cent less likely to have dense breast tissue, a strong risk factor for tumours, found a study by the University of Copenhagen.

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