

Curcumin prevents peripheral organ dysfunction associated with Alzheimer disease in animal models

Prevention of disorders through improved treatments identified.

USA, August 18, 2021 /EINPresswire.com/ -- The clinical progression of Alzheimer's disease (AD), a central nervous system disorder, is closely linked with peripheral organ dysfunction. The

“

“Curcumin can be good news to prevent these disorders to a great extent, which are largely found in the form of disorders and abnormalities amidst the ageing and cognitive impairments.”- Dr.Maiti”

Dr. Maiti

research led by Dr. Maiti and Dr. Dunbar at Field Neurosciences Institute, Ascension St. Mary's Hospital and Central Michigan University, Michigan, USA was to understand the pathological changes in peripheral organs in mouse models of AD and to check if natural anti-inflammatory molecule, Curcumin, can prevent these changes. [Jayeeta Manna, Gary L. Dunbar and Panchanan Maiti. [Curcugreen \(BCM-95\) Treatment Prevented Splenomegaly and Other Peripheral Organ Abnormalities](https://doi.org/10.3390/antiox10060899) in 3xTg and 5xFAD Mouse Models of Alzheimer's disease. Antioxidants 2021, 10, 899. <https://doi.org/10.3390/antiox10060899>].

The deposition of amyloid beta plaques and neurofibrillary tangles are the hallmark pathologies of AD, but severe splenomegaly associated with inflammation and disruption of the immune system warranted investigations to understand the interaction between central and peripheral systems interacting in AD. Curcumin, due to its anti-inflammatory and immune modulating properties, could preserve the cytoarchitecture of the spleen and prevent its enlargement.

“We used 3xTg and 5xFAD mice which are well-established models for AD research, producing memory loss and cognitive impairments which progress with age, along with increased levels of inflammatory cytokines. We found that Curcumin was able to restore increased levels of caspases 3, 6, TNF- α , IL-1 β and decreased Bcl2, IL-10, COX-IV and pAkt/Akt levels. This shows the potency of Curcumin to reduce stress and cellular damages, improve their survival and protect from immune reactions. “, says Dr. Maiti, Principal Research Neuroscientist, and Dr. Dunbar, Executive Director, Field Neuroscience Institute, Ascension St. Mary's Hospital, Saginaw, Michigan, United States.

The degenerative changes, metabolic dysfunction in the liver and kidney and abnormal lung function is associated with an increased risk of developing dementia and cognitive impairment in later life. Curcumin treatment was able to restore the function in these organs thereby helping to clear AD-related amyloid proteins. Dr.Maiti also shared, "Alzheimer is a disease of multi-organ disorder, developing from metabolic dysfunction and pathological process in both brain and the peripheral organs. The free Curcumin levels achieved with a bioavailable formulation of curcuminoid and essential oil of turmeric, Curcugreen (BCM-95) in blood, brain, liver and kidneys prevented the degenerative changes and was about 200 to 300 times more prevalent than the levels reported for natural Curcumin in other studies."

Dr.Maiti explains further, "We understand that these AD pathogenesis is not confined to the central nervous system, but it also involves metabolic dysfunction in the peripheral organs. Curcumin can be good news to prevent these disorders to a great extent, which are largely found in the form of disorders and abnormalities amidst the ageing and cognitive impairments." The scientific community could gain valuable insights into the usage of this formulation for the prevention of several pathological conditions."

Dr. Panchanan Maiti is the Principal Research Neuroscientist, Field Neuroscience Institute, Ascension St. Mary's Hospital, Saginaw, Michigan, United States. Dr.Maiti is a neuroscientist with several years of post-PhD research experience on neurodegenerative diseases, especially on Alzheimer's, Parkinson's, Huntington's diseases and glioblastoma. He is an Instructor, at Brain Research Laboratory, Dept. of Health and Human Services, Saginaw Valley State University, MI, USA and also an adjunct faculty, at Dept. of Psychology, Central Michigan University, USA. Prof. Gary Dunbar is the Executive Director of Field Neuroscience Institute, Ascension St. Mary's Hospital, Saginaw, and Professor of Psychology of Central Michigan University, USA.

Dr. Panchanan Maiti

Field Neurosciences Institute, Ascension St. Mary's hospital

[email us here](#)

This press release can be viewed online at: <https://www.einpresswire.com/article/549051532>

EIN Presswire's priority is source transparency. We do not allow opaque clients, and our editors try to be careful about weeding out false and misleading content. As a user, if you see something we have missed, please do bring it to our attention. Your help is welcome. EIN Presswire, Everyone's Internet News Presswire™, tries to define some of the boundaries that are reasonable in today's world. Please see our Editorial Guidelines for more information.

© 1995-2021 IPD Group, Inc. All Right Reserved.