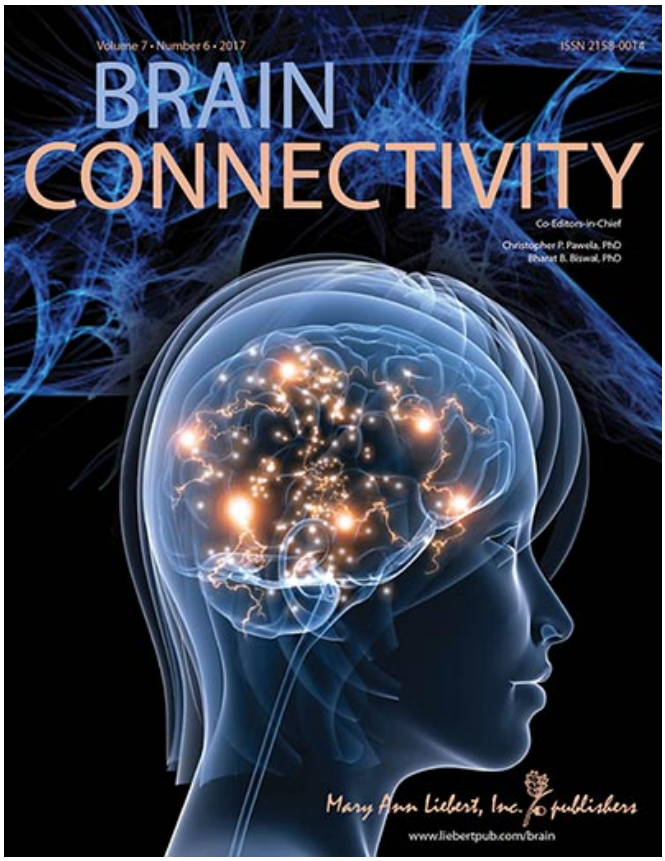
Alzheimer's disease biomarker identified across test sites

12 September 2017



Credit: Mary Ann Liebert, Inc., publishers

A new study has demonstrated the potential to use a frequency distribution-based index of brain functional connectivity as a biomarker for detecting Alzheimer's disease and mild cognitive impairment (MCI). These new findings, which show the index of functional connectivity to have good accuracy across databases and test sites, are published in *Brain Connectivity*.

The article entitled "Can a Resting-State Functional Connectivity Index Identify Patients with Alzheimer's Disease and Mild Cognitive Impairment Across Multiple Sites?" was coauthored by Keiichi Onoda and colleagues from Shimane University (Japan), representing the Alzheimer's Disease Neuroimaging Initiative (ADNI). The researchers compared multi-variant pattern analysis (MVPA) and a frequency distribution-based index approach to evaluate functional connectivity and determine which method yielded consistent results across two different databases and sites that were part of the ADNI.

"Dr. Onoda and colleagues are among the first researchers to test the predictive power of their computer image analysis methods to detect Alzheimer's disease and mild cognitive impairment on several large publicly available imaging databases," states Christopher Pawela, PhD, Editor-in-Chief of *Brain Connectivity* and Assistant Professor, Medical College of Wisconsin. "The potential for any imaging biomarker to find widespread clinical usage depends on its ability to predict disease correctly in a large number of subjects. These researchers have made progress towards this goal by developing a biomarker that shows promise in these large imaging databases."

More information: Keiichi Onoda et al, Can a Resting-State Functional Connectivity Index Identify Patients with Alzheimer's Disease and Mild Cognitive Impairment Across Multiple Sites?, *Brain Connectivity* (2017). DOI: 10.1089/brain.2017.0507

Provided by Mary Ann Liebert, Inc

APA citation: Alzheimer's disease biomarker identified across test sites (2017, September 12) retrieved 3 May 2021 from https://medicalxpress.com/news/2017-09-alzheimer-disease-biomarker-sites.html

This document is subject to copyright. Apart from any fair dealing for the purpose of private study or research, no part may be reproduced without the written permission. The content is provided for information purposes only.