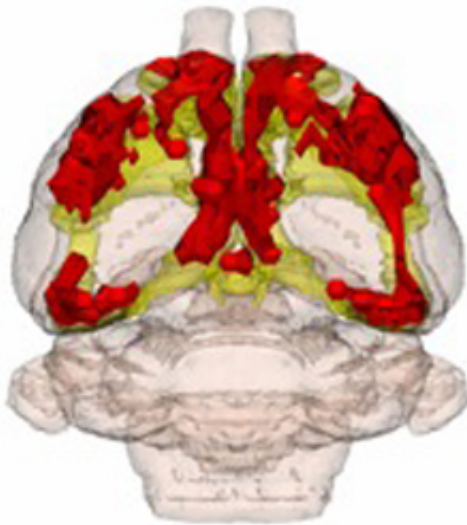


Breakthrough technology for testing Alzheimer's and Parkinson's drugs

February 18 2010



Visualization of activated neural networks using the Ekam Brain Atlas.

(PhysOrg.com) -- In a breakthrough development for early drug research, Northeastern University scientists are now able to test, in real time, the impact of new drugs being developed to treat neurodegenerative diseases like Alzheimer's and Parkinson's.

A patented new imaging technology developed by Northeastern's Center for Translational NeuroImaging (CTNI) enables researchers to produce highly accurate data without resorting to traditional preclinical testing methods. Those methods involve euthanizing laboratory animals at different stages of the study to assess disease progression and the

effectiveness of the drug.

“Animal imaging is crucial in early [drug discovery](#), but the use of anesthesia creates an artificial situation that can mask true drug activity,” said Craig Ferris, CTNI director and professor of psychology and pharmaceutical sciences. “Studying awake animals leads to improved drug safety evaluations and data accuracy.”

Ferris noted the testing they are now able to perform at CTNI maximizes accuracy and leads to improved [drug development](#) processes for pharmaceutical and biotechnology companies that are working to treat [central nervous system](#) diseases, including Alzheimer’s and Parkinson’s diseases.

The center’s imaging-based preclinical testing is performed under the aegis of a new business venture, called Ekam Imaging, Inc., founded by a team that includes Ferris and Graham Jones, professor and chair of the department of chemistry and chemical biology at Northeastern.

The technology has spawned eight patents focused on the imaging of animals and a new method for tagging drugs using microwave-mediated organic synthesis technology. This procedure allows injected compounds to be more accurately tracked and evaluated for efficacy.

Additionally, the center uses advanced data-analysis techniques, including three-dimensional brain “atlases” used for data visualization, and imaging models of various disease conditions.

“The advantages of our technology give researchers the ability to provide information and analysis to drug companies that enable them to make more informed go/no-go decisions on their drug development programs,” added Ferris. “It will help reduce the time to market for new therapeutics and lower the overall cost of drug development.”

Provided by Northeastern University

Citation: Breakthrough technology for testing Alzheimer's and Parkinson's drugs (2010, February 18) retrieved 4 May 2024 from <https://medicalxpress.com/news/2010-02-breakthrough-technology-alzheimer-parkinson-drugs.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.