

IMPACT PROFILE

Increasing Research Access for People with Down Syndrome

Improve clinical trial access for people with Down Syndrome by finding ways to replace neuroimaging with blood-based biomarkers.

The Challenge

Most adults with Down Syndrome develop amyloid plaques, protein buildup that precedes Alzheimer's Disease. Detection of these plaques has historically relied on neuroimaging, which is expensive, requires access to specialized medical facilities, and difficult for many adults with Down Syndrome to complete. Further, early intervention has demonstrated the best success in other forms of Alzheimer's Disease, suggesting that measurements of amyloid plaques need to be accurate at low levels.

The Approach

We will investigate how well new blood-based biomarkers detect low levels of amyloid plaques in adults with Down Syndrome by:

- Comparing results from blood and brain scans.
- Investigating cases where the blood test and brain scans do not match.
- Using advanced computer models to estimate how long it takes for Alzheimer's changes to appear.

The Impact

This project has the potential to significantly impact both the clinical domain and the Down Syndrome community. This project reduces barriers to research participation and care access for a population that historically has had limited inclusion in Alzheimer's Disease studies. Economically, it will reduce costs associated with neuroimaging, further expanding research participation.

RESEARCH HIGHLIGHTS

- Potential to **impact up to 400,000 individuals** with Down Syndrome in the U.S.
- **Reduce neuroimaging requirements** through the application of blood-based biomarkers.
- **Simplify participation** in clinical trials.
- **Benefits historically excluded population.**

Key Benefits

Reducing clinical trial enrollment burden through blood-based biomarkers will result in **Clinical, Community** and **Economic** benefits.



Clinical

Clinical Innovation Access: Expanding access to participation in Alzheimer's Disease research in adults with Down Syndrome. (*Potential*)



Community

Life Expectancy & Quality of Life: Treating Alzheimer's Disease in Down Syndrome will address the primary lifespan limiter in this population. (*Potential*)



Community

Health Care Accessibility: Simplifying screening procedures for Alzheimer's Disease clinical trials. (*Potential*)



Economic

Cost Savings: Reduce clinical trial costs by reducing neuroimaging. (*Potential*)

The team:

Julie Wisch, Dept. of Neurology; Beau Ances, Dept. of Neurology; Laura Ibanez, Dept. of Psychiatry, Washington University in St. Louis. The Alzheimer's Biomarker Consortium – Down Syndrome (ABC-DS).

Contact:

Julie Wisch julie.wisch@wustl.edu

Find out more:

<https://abc-ds.org/>

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