Visualized Inspection of Tau for Alzheimer's Loci

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Scientific Question

Alzheimer's disease is currently the 6th leading cause of death in the US, with over 5 million Americans affected by this neurodegenerative disease.

Recent research has hinted at a link between the spread of Tau Protein in the brain and developing Alzheimer's.

We want to determine if the spread of Tau proteins can be visualized and even predicted using connectomes, focusing Alzheimer's therapies.

Our Solution

By constructing a full connectome of the mouse’s brain, we can achieve a complete understanding of the connectivity of the brain.

In doing so, we will attempt to correlate the spread of the Tau protein to the connectivity between brain areas, uncovering crucial information about the spread of Alzheimer’s and opening the door for more precise medical treatments.

Costs/Expenditures

- Negligible items are costs that represent <1% of the total proposal
- Total cost of roughly $9.72 billion
- The 5 year time frame includes imaging, data analysis, and archival for public use

Item	Cost
PET Scanning	Negligible
Microscale Connectomes	$8 billion
Genetically Modified AD Mice	Negligible
Data Storage	$600 million
Data Processing	$100 million
Electron Microscope (5)	$5 million
Lab Insurance	$2 million
Education/Conferences	$5 million
Researcher/Staff Salary	$1 million
10% Standard Budget Buffer	$1 billion