Convergence of Abeta and tau pathogenic mechanisms on axonal transport

https://neurodegenerationresearch.eu/survey/convergence-of-abeta-and-tau-pathogenic-mechanisms-on-axonal-transport/

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Convergence of Abeta and tau pathogenic mechanisms on axonal transport

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Alzheimer's Research UK

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3

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Research Abstract

Normal molecular and cellular mechanisms, and disease mechanisms, often act in pathways where one protein signals to another, activating it, blocking it, changing its location or its expression, etc. Molecular events are considered as ‘upstream’ or ‘downstream’ in these pathways, and pathways can converge. This project seeks to understand the pathways linking Abeta and tau pathology in Alzheimer’s disease. Imagine a car accident where one driver exceeds the speed limit and another fails to look carefully. These actions converge (in this case literally) to cause the accident. If the speeding driver had overslept and the other had been distracted, these events would be ‘upstream’ of the accident. If the road is blocked making other

people late for work, this would be ‘downstream’. In Alzheimer’s disease, tau appears to act downstream of Abeta or on a separate branch of the pathway (like the other driver) that converges on a common, downstream molecular event. New data from our group provide clues about the function of this putative common, downstream target, which we aim to investigate this further and potentially identify the molecule/s involved. This could lead to new strategies to prevent either branch of the pathway from causing disease.

Further information available at:

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