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New research shows a technique using ion beams to better see the structures inside human brain cells, which could help our understanding of brain diseases.

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ROCKVILLE, MD → Improving the way scientists can see the microscopic structures of the brain can improve our understanding of a host of brain diseases, like Alzheimer's or multiple sclerosis. 1
Studying these diseases is challenging and has been limited by accuracy of available models. 1

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To see the smallest parts of cells, scientists often use a technique called electron microscopy. 1 1
Electron microscopy historically involves adding chemicals and physically cutting the tissue. 1
However, this approach can change the way the cells and structures look, perturbing their natural state, and can limit resolution. An alternative method, called cryo electron tomography (cryo ET), 1 provides clearer images of the brain 1

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By applying this approach to brain tissue from individuals with Alzheimer's disease, they were able to