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Targeting Miro1 for detecting and treating Tauopathy

Researchers in the Xinnan Wang lab have discovered a novel biomarker and target for treating tauopathies.

Alzheimer's disease, Progressive supranuclear palsy, Frontal temporal lobar degeneration, and other neurodegenerative conditions characterized by tauopathy are difficult to diagnose early and remain currently untreatable. Increasing evidence has implicated impaired mitochondrial homeostasis in the pathogenesis of tauopathy, offering a potential avenue for diagnosing and treating tauopathies early.

The Xinnan Wang lab has demonstrated that the Miro1 protein can function as a biomarker for impaired mitochondrial homeostasis indicative of tauopathy. This biomarker can be targeted therapeutically and assayed from painless, minimally invasive skin biopsies to guide treatment.

Applications

- Novel biomarker for Tauopathy diagnostics/companion diagnostics
- Novel therapeutic target for Tauopathies
    - Alzheimer's disease
    - Progressive supranuclear palsy
    - Frontal temporal lobar degeneration

Advantages

- Novel biomarker and therapeutic target for tauopathy
- Can be assayed with painless, minimally invasive procedure
- The Xinnan Wang lab has developed a small molecule inhibitor for the target

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