Understanding cell death in Parkinson's disease

As a renowned expert on Parkinson's disease, Dr. Andersen is pursuing a wide array of leads toward treatments for this complex neurodegenerative disorder. She has identified several early risk signals for Parkinson's, an age-related illness that causes a progressive decline in movement and muscle control. The symptoms can include shaking hands and difficulty with walking.

Amongst the early risk signals identified by Dr. Andersen are elevated levels of iron and declining amounts of a protective antioxidant called glutathione. Recently, the Andersen lab has also discovered valuable clues by examining the roles of enzymes and other proteins involved in nerve cell degeneration. Normally, proteins carry out the routine work inside cells. But some enzymes can promote the symptoms of Parkinson's disease. Blocking those enzymes might slow down the disease. Other therapies might result from the opposite tactic: reinforcing the work of different enzymes that guard against Parkinson's disease. These enzymes seem to prevent damage to genes that protect the nervous system.

The Andersen lab is also involved in identifying potential biomarkers for Parkinson's that may allow early interventional therapy.

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