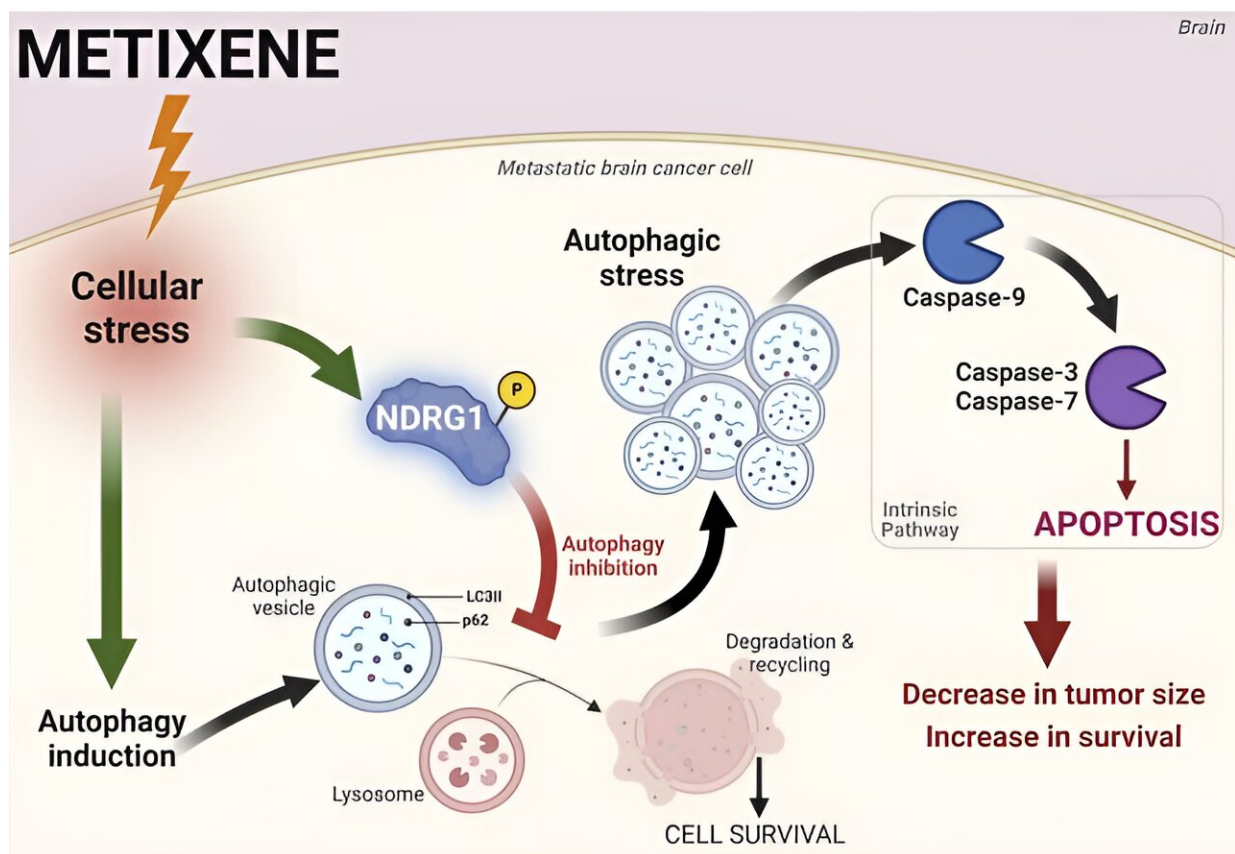


Metixene identified as a promising candidate in the treatment of metastatic brain cancer

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Graphical abstract. Credit: *Journal of Clinical Investigation* (2023). DOI: 10.1172/JCI161142

A new study has revealed that Metixene, an antiparkinsonian drug, has shown remarkable potential as a novel treatment for metastatic breast cancer and brain metastases, providing hope for patients facing this devastating disease. The study was conducted by a team of researchers led by Dr. Jawad Fares at Northwestern University and was [published](#) in the *Journal of Clinical Investigation*.

Metastatic brain cancer, particularly in the context of breast cancer, represents a significant challenge in the field of oncology, with limited therapeutic options and poor clinical outcomes. However, this study has identified Metixene as a potential game-changer in the fight against this formidable disease.

In a comprehensive investigation, the research team screened a library of 320 central nervous system small-molecule inhibitors known to be [blood-brain barrier](#) permeable and approved by the U.S. Food and Drug Administration. Metixene emerged as a standout candidate, demonstrating the ability to reduce cancer cell viability and induce cancer cell death in various [metastatic breast cancer](#) subtypes.

Key findings of the study include:

- **Effective Tumor Reduction:** Metixene significantly reduced mammary tumor size in orthotopic xenograft assays, highlighting its potential as a therapeutic agent.
- **Enhanced Survival:** In an intracardiac model of multiorgan site metastases, Metixene improved survival rates, offering hope to those with widespread metastatic disease.
- **Extended Survival in Brain Metastases:** Metixene also exhibited efficacy in mice with intracranial xenografts and in an intracarotid model of multiple [brain metastases](#), significantly extending [survival rates](#) in these challenging scenarios.

These promising results open up new possibilities for the treatment of metastatic brain cancer. Furthermore, Metixene's reported minimal side effects in humans make it a strong candidate for clinical translation, offering a glimmer of hope for patients worldwide.

More information: Jawad Fares et al, Metixene is an incomplete autophagy inducer in preclinical models of metastatic cancer and brain metastases, *Journal of Clinical Investigation* (2023). [DOI: 10.1172/JCI161142](https://doi.org/10.1172/JCI161142)

Provided by Northwestern University

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