UCI 趙 Chao Family Comprehensive Cancer Center

Targeting of Mitochondrial Protein Magmas Enhances Sensitivity to GBM Treatment

Scientific Retreat | November 8, 2024

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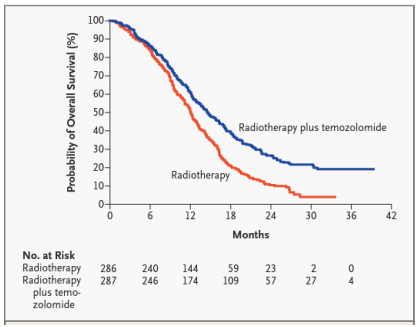
Targeting of Mitochondrial Protein Magma Enhances Sensitivity to GBM Treatment

Highly aggressive malignant Brain cancer
Incidence 3 in 100,000 people in the U.S.

Median survival: 14.6 months



Radiation

Surgery

Standard of Care

Chemotherapy (TMZ)

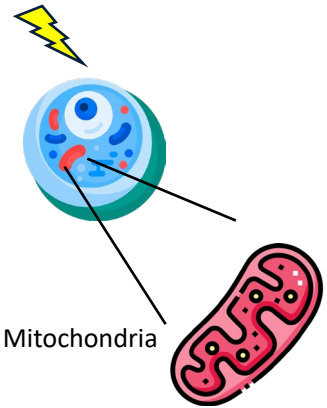
Tumor Treating Fields (DeNovo)

*Clinical trials for new treatments fail to meet their primary endpoints

Stupp R. et. al. 2005 N Engl J Med

Targeting of Mitochondrial Protein Magma Enhances Sensitivity to GBM Treatment

Radiation / Chemotherapy



Resistance mechanisms
DNA damage repair
Glioma stem cells
Tumor heterogeneity
Mitochondrial reprogramming*

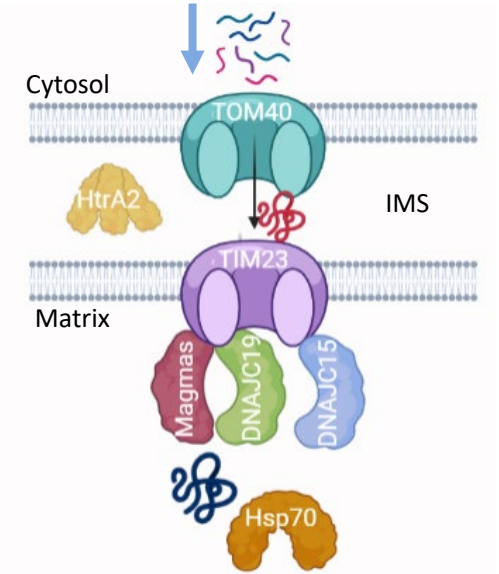
Research Focus

Role of MAGMAS in treatment resistance

MAGMAS - ~13kDa Mitochondrial Protein
Highly expressed in GBM
Regulates protein trafficking in the mitochondria
Inhibition with BT9 and KD sensitizes cells to treatments

Protein Trafficking Pathway

Precursor proteins



Mature proteins

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Thank You

www.cancer.uci.edu