

Numiera Therapeutics

STALLING THE ENGINES OF CANCER CELLS

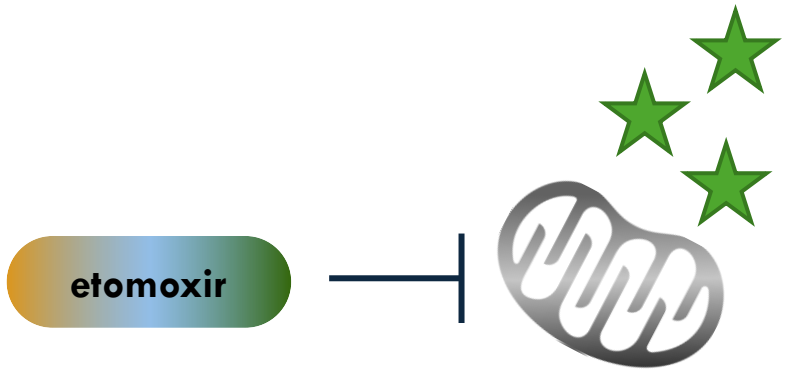
Disease Indication

- Glioblastoma is an aggressive brain tumor, with median survival of 15 months
- 250,000 newly-diagnosed patients each year worldwide
- Only one new therapy has significantly benefited GBM patients in the past 50 years and been integrated into standard-of-care.
- *This drug – temozolomide – only gives patients a few extra months and has serious side effects.*
- *Many patients also take the approved drug bevacizumab, which has no significant survival benefit but reduces brain swelling.*

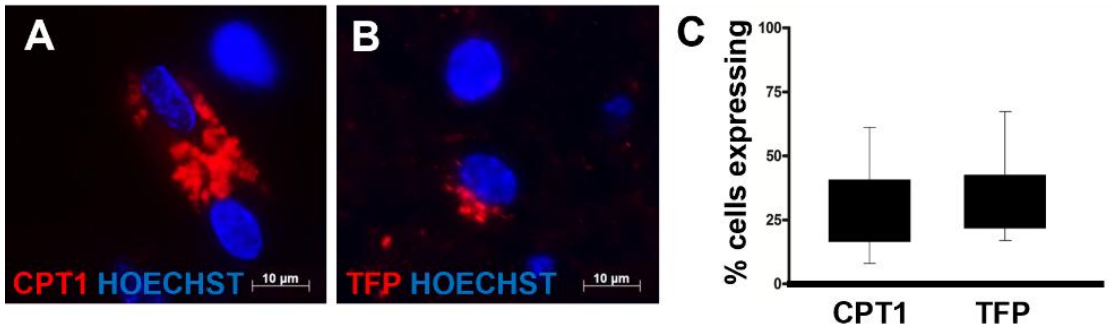


- *Urgent unmet need*

Innovative Solution



First-In-Class
Small-Molecule
CPT-1 Inhibitor



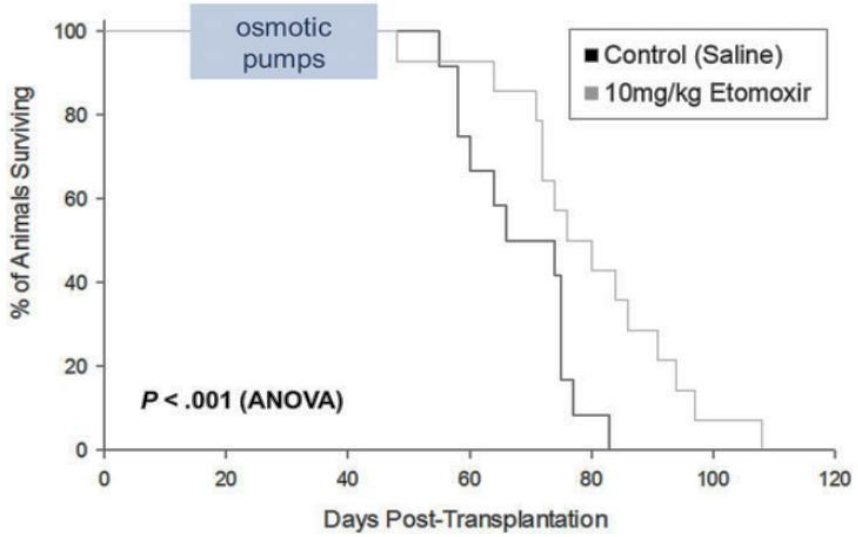
Lin et al. (2017) *Neuro Oncol* 19(1):43-54

The target protein (CPT1) - and other enzymes involved in mitochondrial fatty acid oxidation - are present in every human GBM sample studied, and these are enriched in the cancer stem cells which drive the growth of the tumor.

Preclinical Efficacy

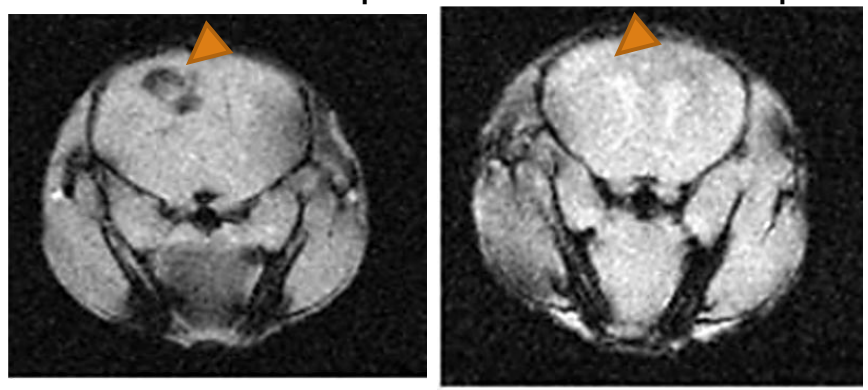


Mouse model of malignant glioma



CONTROL - 75 dpi

TREATED - 75 dpi



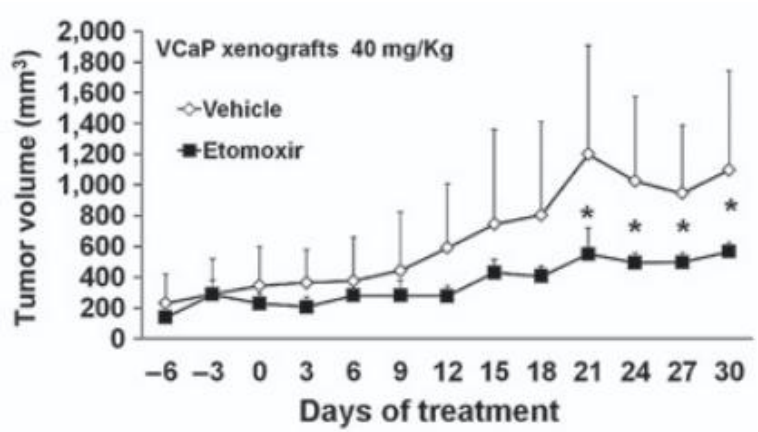
10 mg/kg etomoxir treatment for 28 days

Our team was the first to publish this new target and was awarded by SNO The Society for NeuroOncology [1]

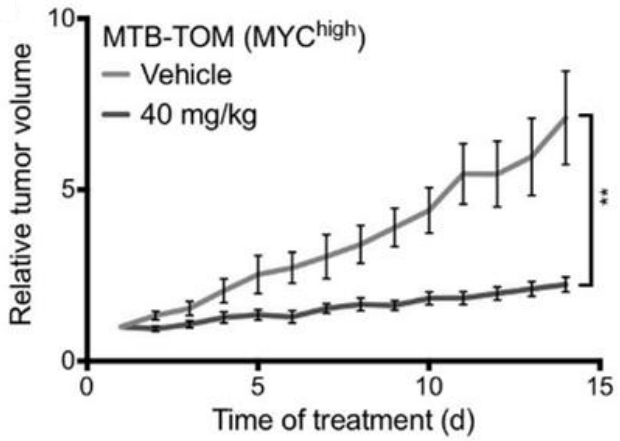
There is now independently-replicated single-agent efficacy in glioblastoma from four other labs [2,3,4,5]

[1]Lin et al. Neuro Onc 2017; [2]Kant et al. Cell Death Disease 2020; Shim et al. Cancer Cell Int 2022; Jiang et al. Nature Communications 2022; Duman et al. Cell Death Disease 2023.

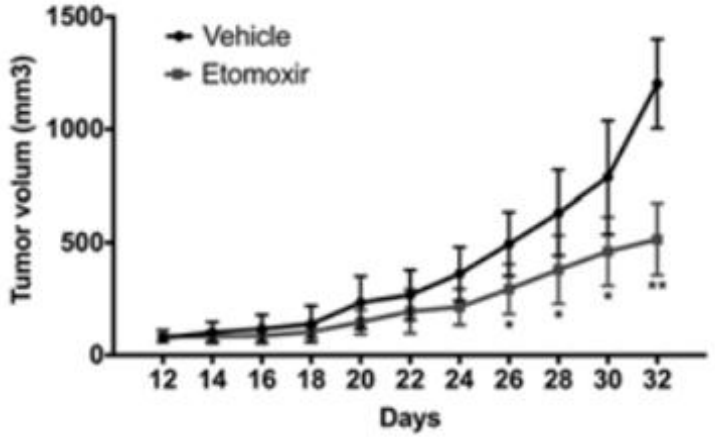
Additional Indications



Androgen Resistant Prostate Cancer:
Schlaepfer et al. (2019)
Mol Cancer 13(10); 2361–71



Triple Negative Breast Cancer:
Camarda et al. (2016)
Nat Med 22(4): 427-32



Invasive Bladder Cancer:
Cheng et al. (2019)
Clin Sci 133: 1745-58

This molecular target is present in multiple aggressive cancers, and etomoxir significantly slows tumor growth.

Clinical Safety

Etomoxir †		Temodar (Temozolomide) *		Avastin (Bevacizumab) #	
Survival Benefit in Glioblastoma	?	Survival Benefit in Glioblastoma	2.5 months	Survival Benefit in Glioblastoma	2.2 months
Percentage of Patient Population Taking This Drug	?	Percentage of Patient Population Taking This Drug	80%	Percentage of Patient Population Taking This Drug	49%
Serious Side Effects		Serious Side Effects		Serious Side Effects	
High liver enzyme levels	<2%	High liver enzyme levels	12%	High blood pressure	18%
Moderate/Severe		Moderate/Severe		Moderate/Severe	
Cardiac arrhythmia or failure	<2%	Low platelet count	14%	Blood clots, stroke or heart attack	11%
Moderate/Severe		Moderate/Severe		Severe/Can Be Fatal	
		Bone marrow depletion	<10%	Kidney Problems	<7%
		Severe/Can Be Fatal		Severe/Can Be Fatal	
		Induction of other cancers	<2%	Fistula	<2%
		Severe/Can Be Fatal		Severe/Can Be Fatal	
Common Side Effects		Common Side Effects		Common Side Effects	
Increased exercise tolerance		Headache		Headache	
		Nausea		Back Pain	
		Vomiting		Watery Eyes	
		Hair Loss		Inflammation	
		Fatigue		Nosebleed	

Etomoxir †	Temodar (Temozolomide) *	Avastin (Bevacizumab) #
Lower hepatotoxicity than standard of care Temodar or Avastin. Fewer deaths in treated group (0.9%) than placebo group (3.3%).	Serious adverse effects include liver toxicity, thrombocytopenia, bone marrow depletion and the induction of other cancers.	Serious adverse effects include heart attack, stroke, blood clots, kidney problems, and fistulas which are sometimes fatal.
† Holubarsch et al. *Clin Sci (Lond)* 2007 226 human subjects treated w/ etomoxir	* Stupp et al. *New Engl J Med* 2005 and GoodRx.com	# Gramatzki et al. *Ann Oncol* 2018 and Avastin.com

Our Goals:

- Move our well-characterized orphan-designated lead asset toward market approval

- Build our pipeline and expand into additional oncology indications

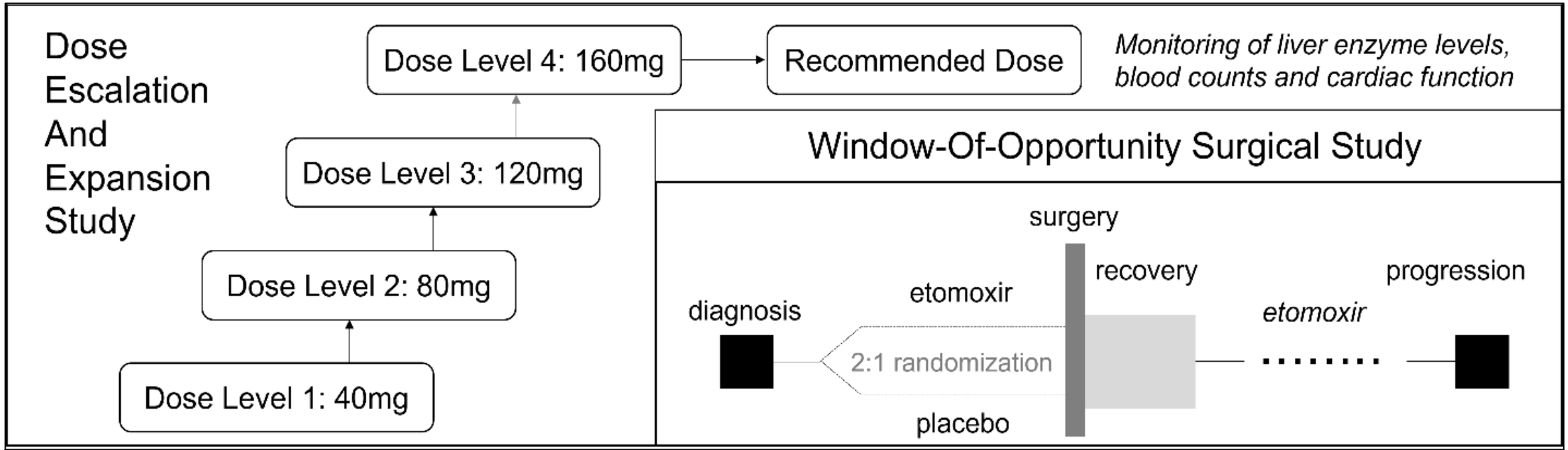
Commercialization Pathway



COMPLETED (PREVIOUSLY FUNDED WORK)	Grants/Investment	Grants/Investment	Commercialization

Pathway Discovery And Target Validation	Preclinical Efficacy Data In Multiple Animal Models	CMC-Pharm-Tox Data And Dosing Studies In Humans	Optimal Dose + Window-Of-Opportunity Trial for GBM	Combined Phase II-III Trial To Evaluate Efficacy	Market Approval And Expansion Into Other Cancers

Trial Design



Then: Move into a Combined Phase II/III Clinical Trial with Bayesian Design + Existing Master Protocol

Clinical Protocol developed by Dr. Patrick Wen, in accordance with the Response Assessment in Neuro Oncology (RANO) 2.0 criteria for clinical trial design in glioblastoma.

Competitive Landscape

Nivolumab, Pembrolizumab, Durvalumab, DC-VAXL
(immunotherapies)
no survival benefit for GBM[1]

Gefitinib, Erlotonib, Afatanib, Lapatinib, Regorafenib, Depatux
(EGF receptor inhibitors)
no survival benefit for GBM[2]



Mitochondrial Targets Are **Game-Changers** In Neuro Oncology

Buparlisib, Paxalisib
(PI3 kinase inhibitors)
no survival benefit for GBM[3]

Vorasidenib
(IDH inhibitor, Agios)
FDA approval in 2024 for
IDH-mutant low-grade glioma

Selexinor, Eltanexor
(XPO1 nuclear export inhibitors)
no survival benefit for GBM[4]

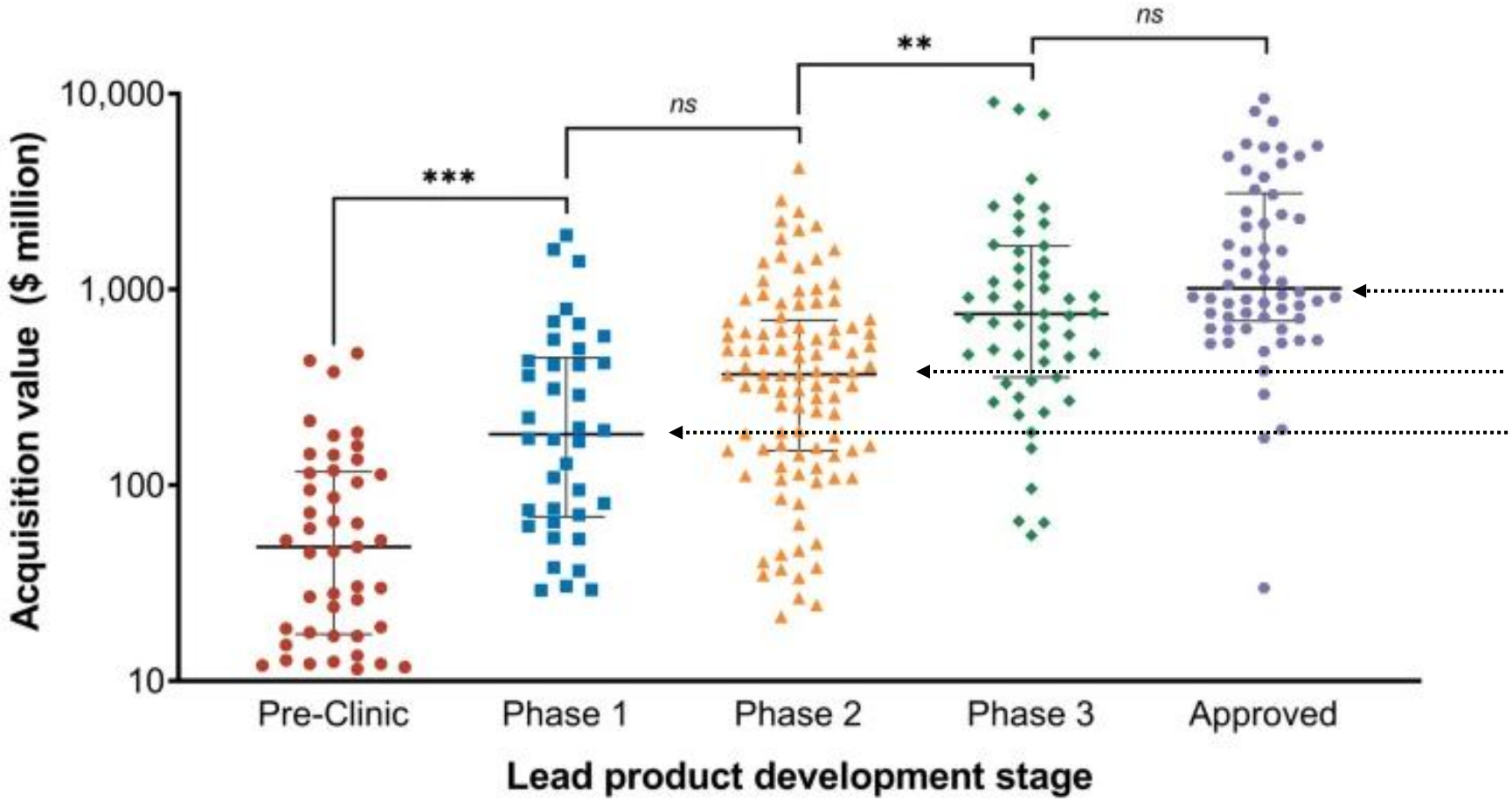
Dordaviprone
(ClpP activator, Chimerix)
FDA approval in 2025 for
H3K27M-mutant diffuse glioma

temozolomide, VAL-083
(DNA damaging agents)
survival benefit of only
2-3 months for GBM[5]

Etomoxir
(CPT1 inhibitor, Numiera)
Awarded orphan drug designation for
all malignant gliomas, including GBM

[1]Begley et al. *Mol Ther* 2025; [2]Pan & Magge *Int J Mol Sci* 2020; [3]Mellinghoff et al. *Neuro Onc* 2024 [4]Lassman et al. *Clin Cancer Res* 2021; [5]Stupp et al. *New Engl J Med* 2005;

Valuation Trajectory



Our intended exit

Our next milestone

Our current stage

Each dot represents a pharma company valuation at acquisition.

Michaeli et al. (2022) Value drivers of development stage biopharma companies. *Eur J Health Economics* 23(8):1287-1296.

Leadership Team

Numiera Therapeutics

Izi Stoll, PhD
Founder & CEO



WESTERN INSTITUTE FOR ADVANCED STUDY

Gordon Beck, PhD
Business Development



Roche

Anjali Hansen, MBA
Clinical Strategy



Genentech

Regina Madigan, MBA
Financial Strategy



Medtronic

John Climaco, JD
Corporate Strategy



CNS Pharmaceuticals

Patrick Wen, MD
Neuro Oncology



HARVARD MEDICAL SCHOOL

Key Partners

SHERIDAN ROSS pc attorneys at innovation

Morgan Lewis

innosphere ventures

TECH. SCIENCE. ACCELERATED.

ONLY ORPHANS COTE
DELIVERING DRUGS THROUGH FDA & EMA

Colorado SBDC

OEDIT

TiE GLOBAL FOSTERING ENTREPRENEURSHIP

Thank You!



Numiera Therapeutics

Let's talk more:
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