Numiera Therapeutics

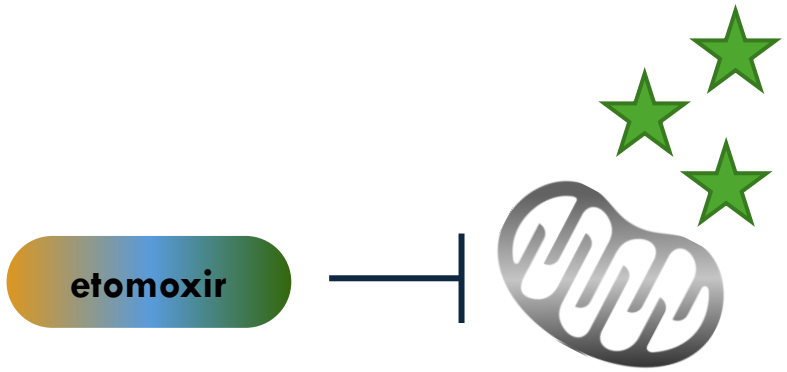
STALLING THE ENGINES OF CANCER CELLS

Disease Indication

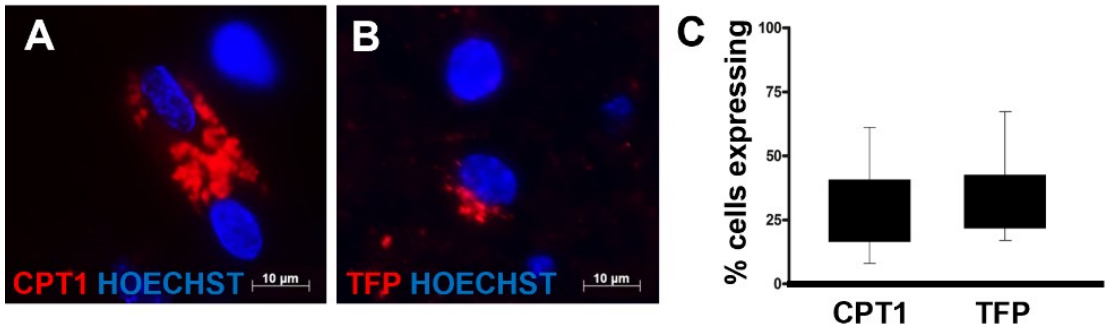
- Glioblastoma is an aggressive brain tumor, with median survival of 15 months
- 250,000 newly-diagnosed patients each year worldwide
- Only one new therapy has significantly benefited GBM patients in the past 50 years and been integrated into standard-of-care.
- *This drug – temozolomide – only gives 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.

Intellectual Property

Further Pipeline Development

Additional patent filings for new molecules

Companion Diagnostic ♦

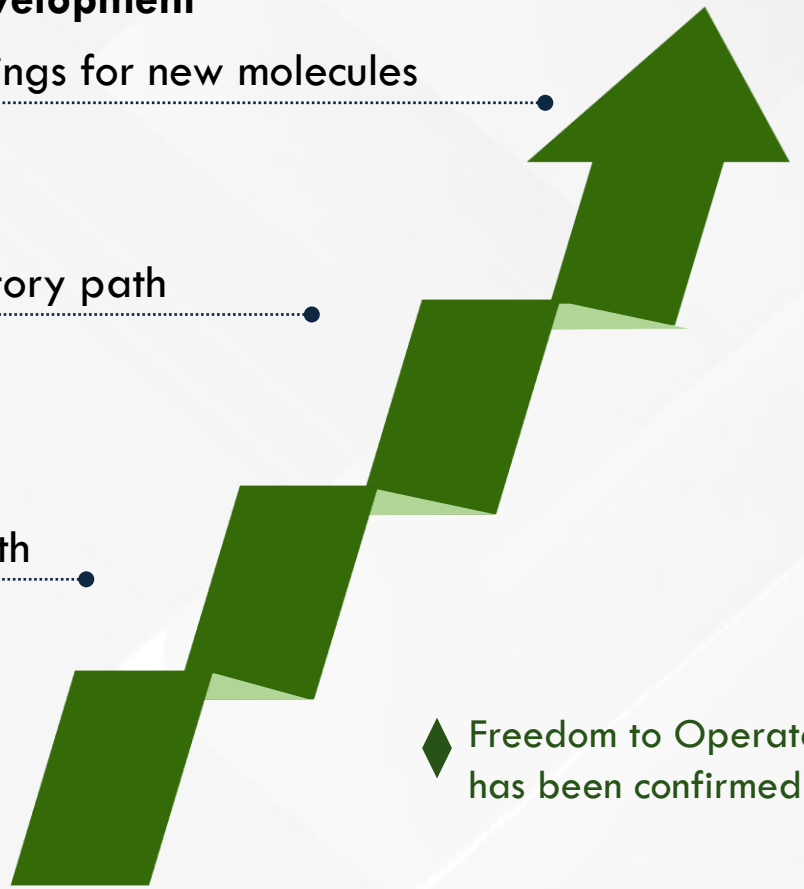
Patent filed in 2024; IVD regulatory path

Combination Product ♦

Patent filed in 2024; 505(b)2 regulatory path

Orphan Designation ♦

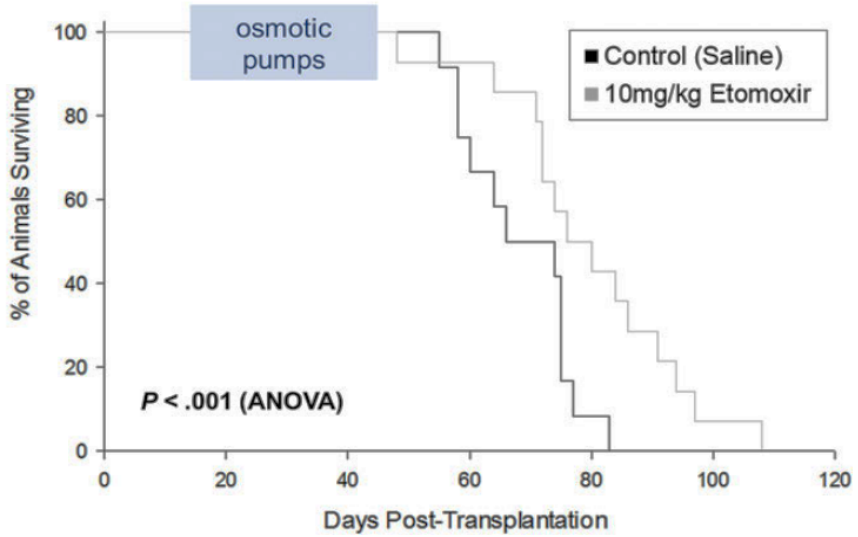
Seven years of *post-approval* market exclusivity



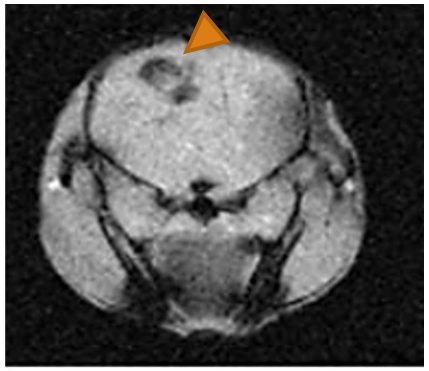
♦ Freedom to Operate has been confirmed

Preclinical Efficacy

Mouse model of malignant glioma



CONTROL - 75 dpi



TREATED - 75 dpi

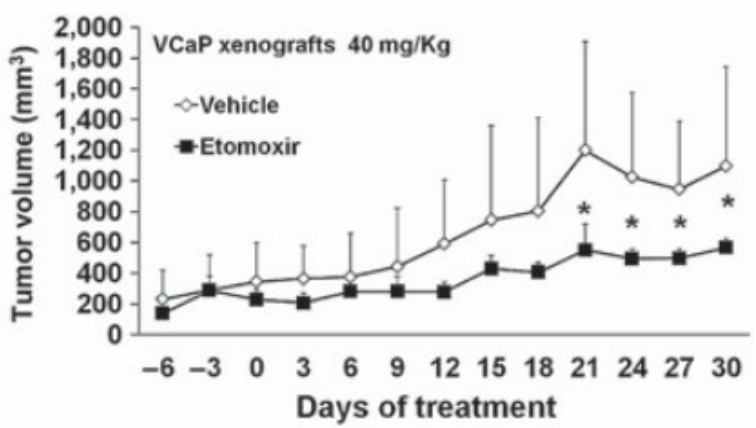
10 mg/kg etomoxir treatment for 28 days

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

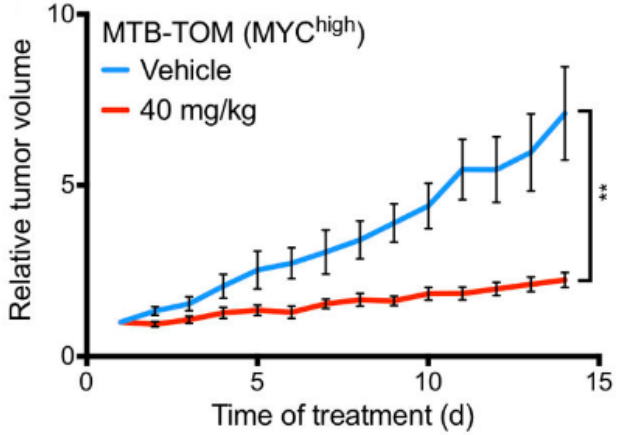
There is now independently-replicated single-agent efficacy in glioblastoma from four other labs [2,3,4,5]

[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.

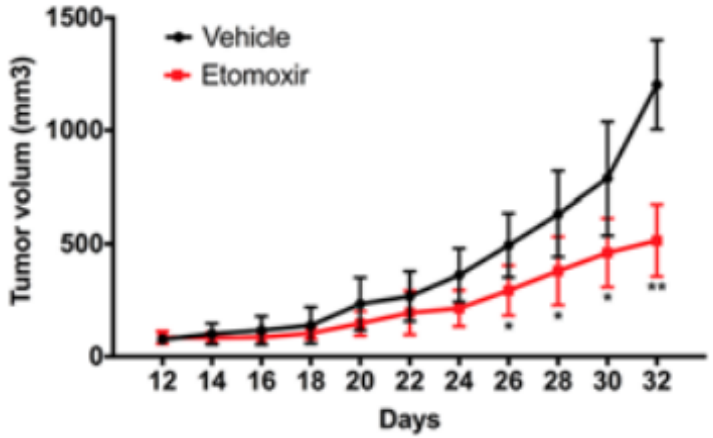
Additional Indications



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



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



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 Moderate/Severe	<2%	High liver enzyme levels Moderate/Severe	12%	High blood pressure Moderate/Severe	18%
Cardiac arrhythmia or failure Moderate/Severe	<2%	Low platelet count Moderate/Severe	14%	Blood clots, stroke or heart attack Severe/Can Be Fatal	11%
		Bone marrow depletion Severe/Can Be Fatal	<10%	Kidney Problems Severe/Can Be Fatal	<7%
		Induction of other cancers Severe/Can Be Fatal	<2%	Fistula Severe/Can Be Fatal	<2%
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

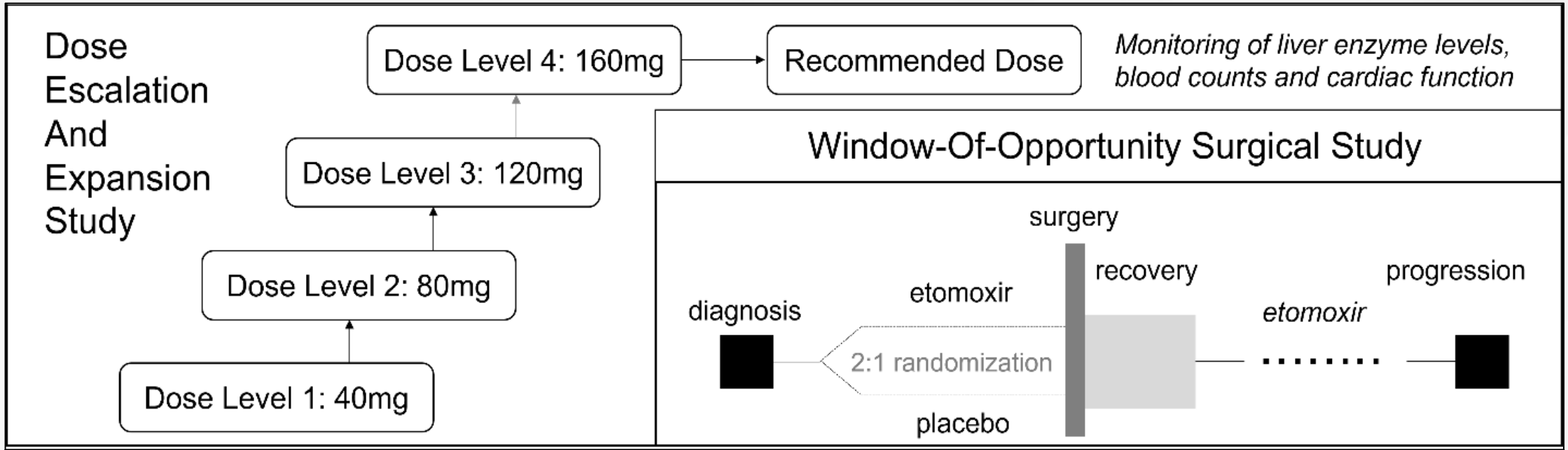
\# Gramatzki et al. *Ann Oncol* 2018 and Avastin.com

Our Goal:

Move our well-characterized orphan lead asset to market approval

Build out pipeline to expand into additional oncology indications

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

Numiera Therapeutics

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)
16+ months survival benefit for IDH-mutant low-grade glioma

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

Dordaviprone
(ClpP activator, Chimerix)
10+ months survival benefit 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;

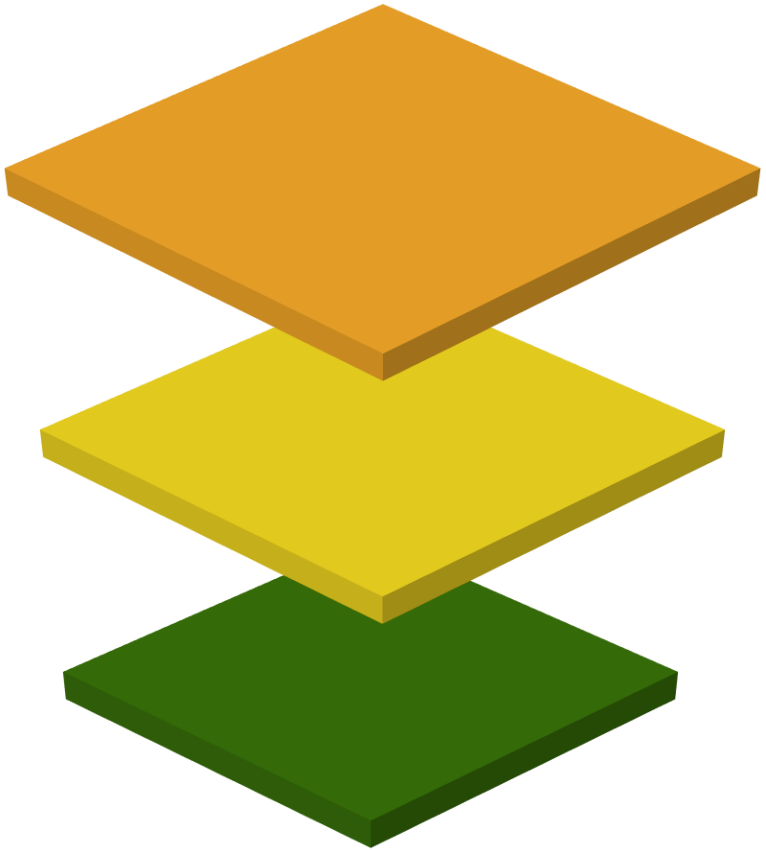
Market Opportunity

Numiera Therapeutics

Treatment-resistant cancers with this mitochondrial target comprise a **$50B+ TAM**

US/EU glioma **SAM of $4B+** by expected market approval date

US/EU glioblastoma **SOM of $2B+** by expected market approval date



Combination Product Oncology Market:
Androgen Insensitive Prostate Cancer
Triple-Negative Breast Cancer
Bladder Cancer

FDA awarded a broader designation for our lead asset than we requested, acknowledging its clinical potential

Quick ramp to market saturation with successful clinical results

[1]Grand View Research; [2]The Insight Partners; CAGR, compound annual growth rate; SOM, serviceable obtainable market; SAM, serviceable addressable market; TAM, total addressable market.

Company Highlights

We have received orphan designation on our lead asset: etomoxir

25% of orphan designated products with Phase I safety data achieve market authorization.

5.3 years is the average time to market authorization from the date of orphan designation.

Phase I clinical data in 226 human subjects indicates our drug is safer than standard of care.

Four additional labs have independently replicated our preclinical efficacy data for this drug.

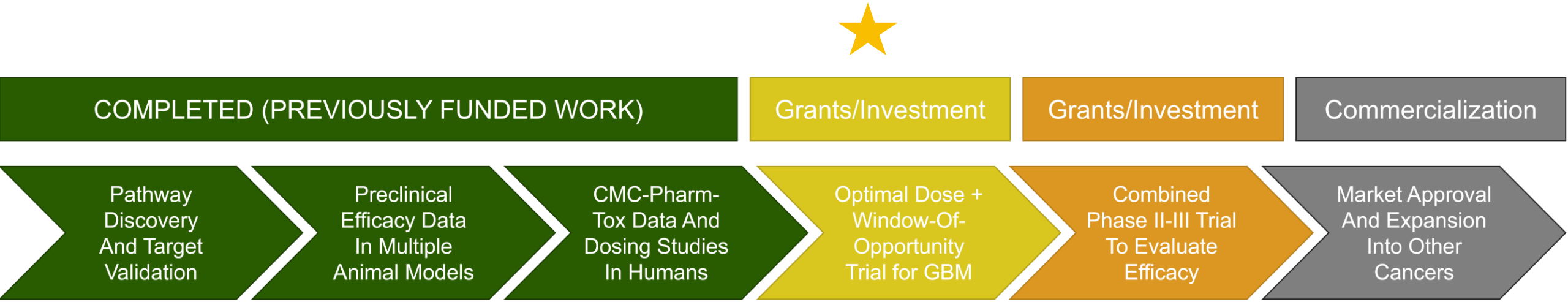
Mitochondrial targets actually benefit neuro oncology patients, with billion-dollar successes.

Additional cancer indications represent a $50B market, with further pipeline development.

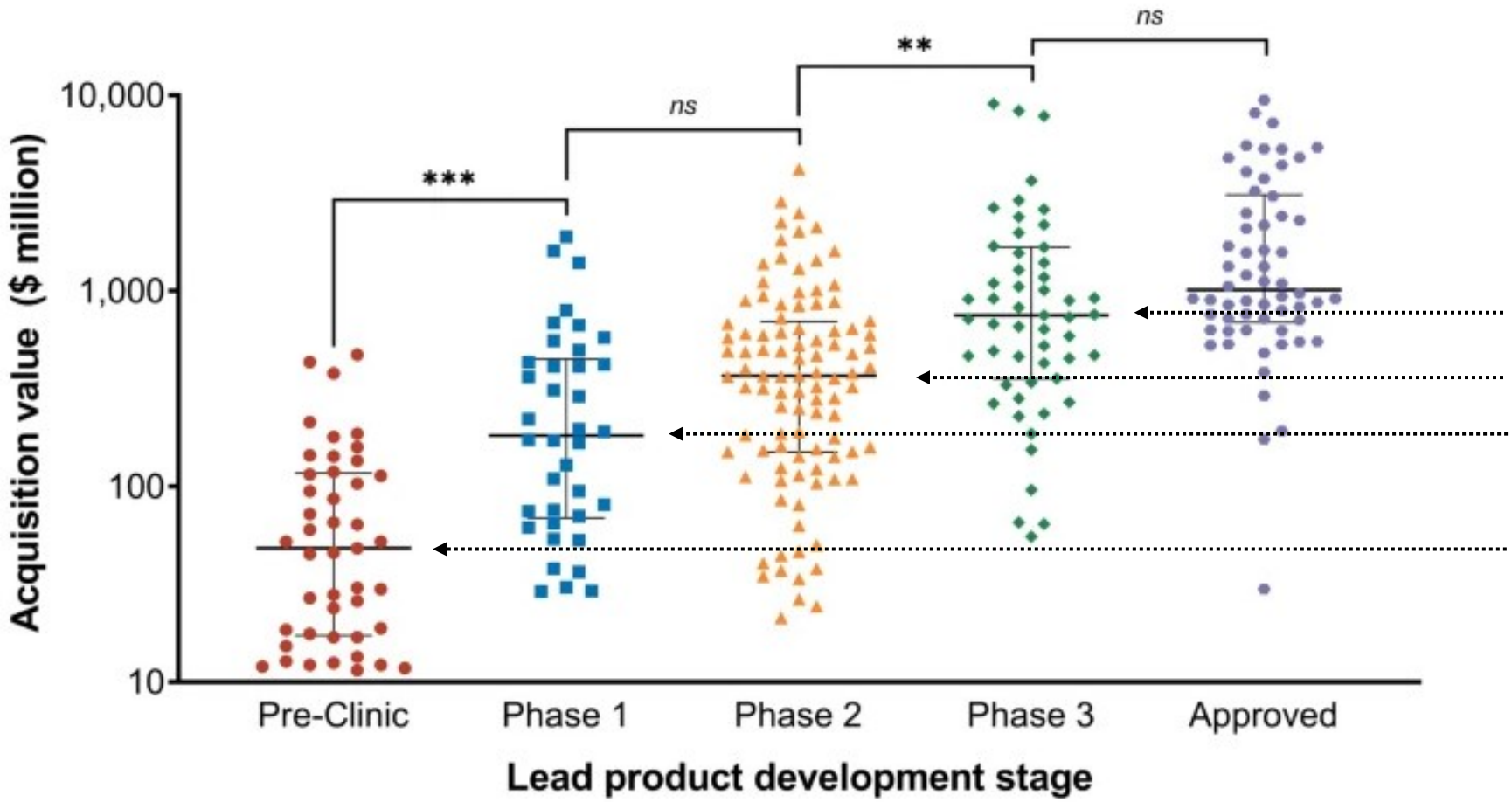
“I do have the advantage of having seen many, many hundreds of potential new therapies. Numiera Therapeutics’ product is in the top tier of my universe.”

- Tim Cote, First Director of the FDA Office of Orphan Products Development

Commercialization Pathway



Exit Strategy



Our intended exit

Our next milestone

Our current stage

Our current valuation

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

Leadership Team

Numiera Therapeutics

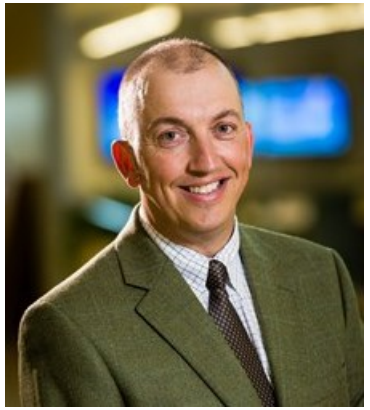
Izi Stoll, PhD
Founder & CEO

WESTERN INSTITUTE FOR ADVANCED STUDY

John Climaco, JD
Corporate Strategy

CNS Pharmaceuticals

Gordon Beck, PhD
Business Development



Roche

Regina Madigan, MBA
Financial Strategy

Medtronic

Dustin Key, MS
Data Management

KAISER PERMANENTE

Patrick Wen, MD
Neuro Oncology

Dana-Farber Cancer Institute

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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