

2026

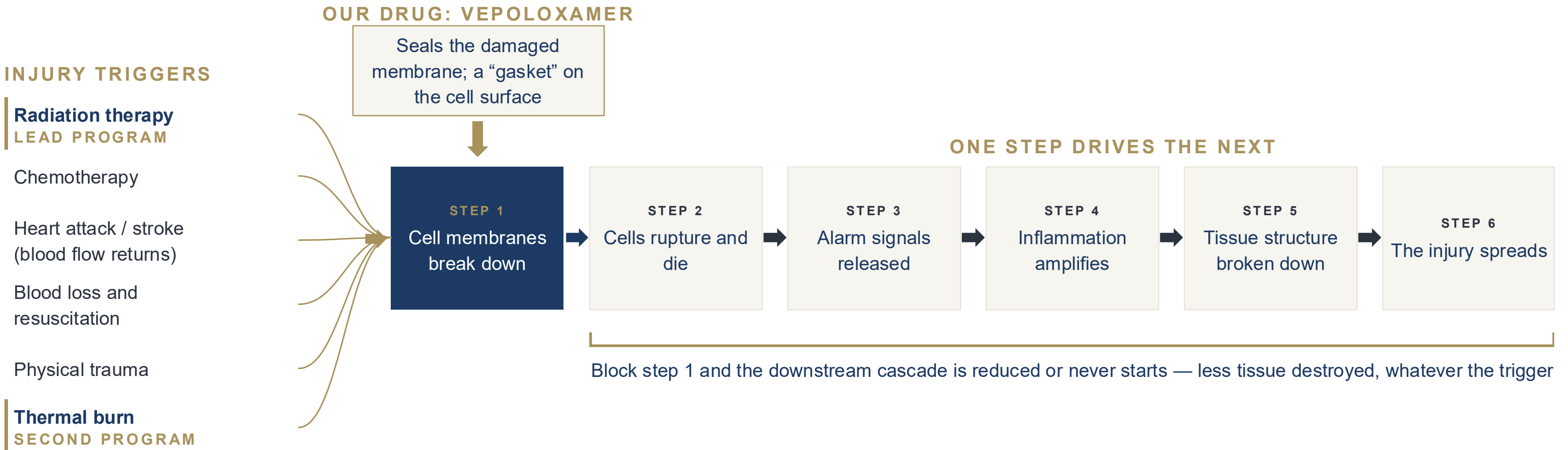


VEPOLOXAMER · A PHARMACEUTICAL GRADE, PURIFIED FORM OF POLOXAMER 188

A cell membrane-repair platform opportunity

THE PLATFORM

When tissue and cells are injured, it is not the initial injury that does all the damage—it is a cascade of cellular injury after the fact.



Because the target is a physical state of the cell membrane, the same mechanism applies wherever membranes are being damaged. That is what makes this a platform, not a single-indication drug.

One mechanism, two treatment opportunities; dosed before the injury, or in the hours after it

DOSED BEFORE

Dosing is scheduled, so the drug is already circulating when the injury occurs, readily available to reduce cellular damage and protect healthy cells

POTENTIAL INDICATIONS

Radiation-induced severe oral mucositis — Lead Program

Radiation proctitis, esophagitis, dermatitis, pneumonitis

Radiological and nuclear countermeasures (BARDA, DoD)

Planned ischemia in surgery and organ preservation

DOSED SOON AFTER

Dosed in the hours after an unplanned injury. Hundreds of thousands of patients a year, almost no approved options — the larger prize.

POTENTIAL INDICATIONS

Acute burns — Second Program

Traumatic brain injury

Ischemic stroke as a tPA and/or thrombectomy adjunct; cardiac protection

Hemorrhagic shock and resuscitation

2026



VEPOLOXAMER · A PHARMACEUTICAL GRADE, PURIFIED FORM OF POLOXAMER 188

Lead indications and strategy

Lead indication: a **first-in-class, de-risked** therapy for radiation-induced severe oral mucositis (RI-SOM)



High Unmet Need: ~90K Radiation Therapy patients/yr across the US, EU & UK face this debilitating toxicity with no FDA-approved preventive; >\$1B addressable market



First-in-Class Mechanism: PURIFIED FORM OF POLOXAMER 188 physically reseals damaged cell membranes, mitigating the injury cascade, without preventing the effect of radiation therapy on cancer cells



Safety De-Risked in Other Indications: ~2,300 human exposures in prior sickle-cell (Vepoloxamer) and cardiac (unpurified P188) trials; Vepoloxamer AEs comparable to placebo, no drug-related deaths. Not yet studied clinically in oral mucositis.



Manufacturing In Hand: ~140 kg of GMP drug substance on hand; enough to supply the planned proof-of-concept trial.



Regulatory Head Start: Complete IND package from prior Phase 3 program.



Strong IP & Exclusivity: Composition-of-matter to 2035 (US + ex-US); Method-of-Use (2041+) granted in Japan, under prosecution in US/EU; plus NCE market exclusivity.

“Pain lengthens time.”

A patient's account of severe oral mucositis, published in the *New England Journal of Medicine*.

This is the toxicity Vepoloxamer is designed to prevent — for the 60–70% of head & neck radiation patients who develop it, and for whom no FDA-approved preventive exists.

STOMATITIS

A fish hook lodges in my throat.

Spittle, kindergarten paste, thickens everything – even vision.

Mouth, pocked with sores & blisters, swollen ulcerated tongue.

Topside, sandpapered with number 7 coarsest grade.

Taste buds, saliva glands, seared.

Cool water, corrosive acid now.

The tongue rests; teeth become enemies.

Coiled steel razored wire atop dentate prison walls.

Only moans escape my lips. I cannot eat or speak.

Inside a howl festers.

Pain lengthens time.

— Anita Hart Balter

A devastating, untreated toxicity in a large, well-defined population

Healthy cells of the mouth, while not the target of the radiation, are also damaged during treatment

IMPACT OF SEVERE ORAL MUCOSITIS

- **A majority of patients** require opioids, need a feeding tube or a pureed diet by the end of treatment, and report difficulty eating and swallowing.
- **More than a third** of patients are hospitalized during treatment, with a mean stay of **nearly 5 days**.
- Treatment breaks let tumors regrow **about 3 times faster**, and each missed day of radiation cuts tumor control by about **1%**.



~90K

new US, EU, and UK head & neck cancer patients/yr requiring radiation

60% - 70%

develop severe Grade 3+ mucositis (98.6% develop some OM)

\$1B+

global addressable market (US + EU + UK)

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FDA-approved drugs to prevent radiation-induced SOM

Vepoloxamer: novel mechanism of action for Radiation-Induced Severe Oral Mucositis, minimizing damage to healthy cells without protecting the tumor



A non-ionic triblock copolymer. Vepoloxamer integrates into damaged cell membranes, acting upstream of the oxidative cascade that drives mucosal injury.



Regulatory head start

A complete filed IND (EPIC Phase 3 in sickle cell); ~75% of that language is reusable for the oral mucositis IND. Failure in sickle cell was wrong indication, not a molecule failure*.



Safety de-risked in other indications

~2,300 human exposures in prior trials in other indications (sickle cell (Vepoloxamer), and cardiac (unpurified P188)) with no drug-related deaths, Vepoloxamer AEs comparable to placebo. Not yet studied clinically in oral mucositis.



Manufacturing in hand

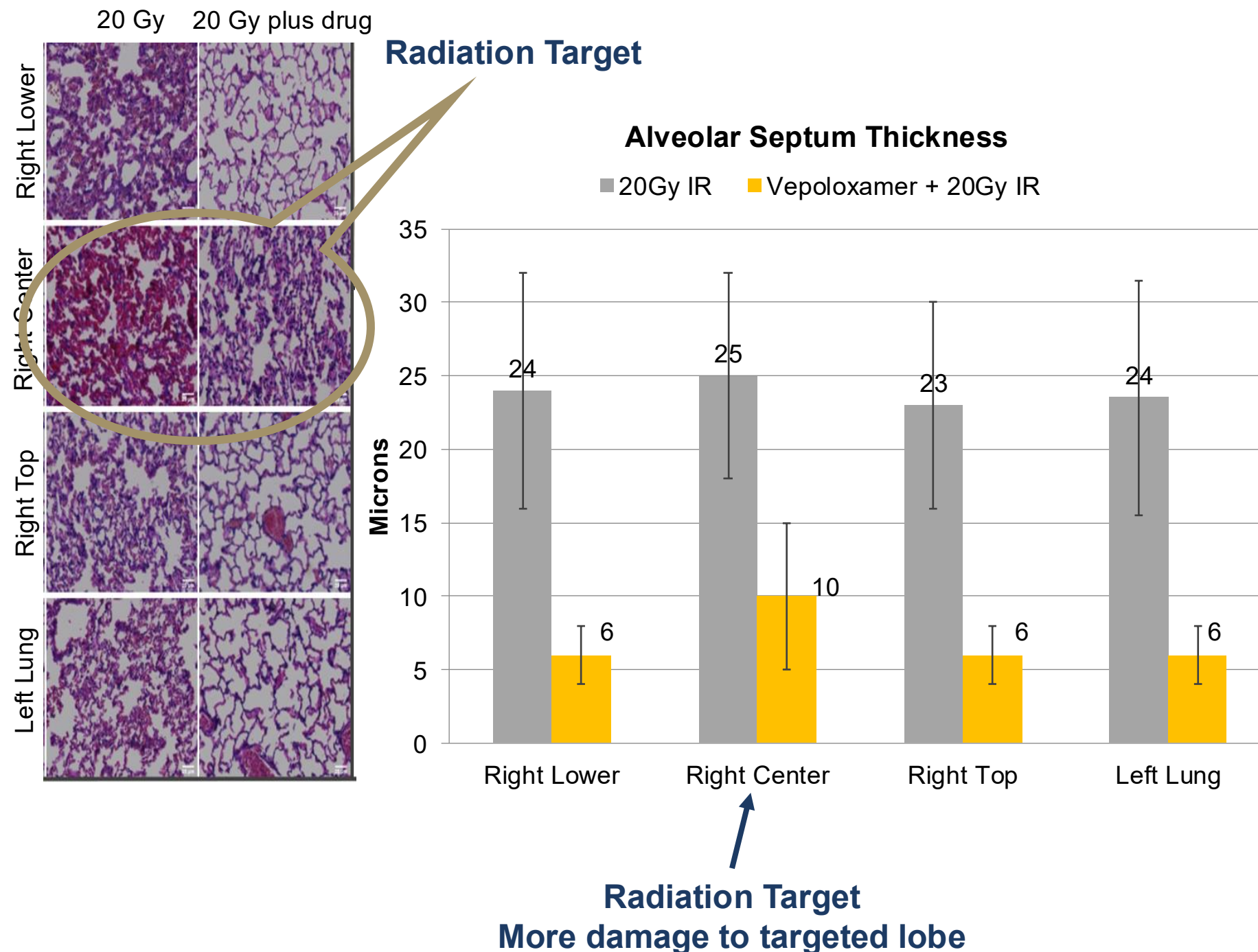
~140 kg of GMP API on hand (enough for initial trials) and a documented, transferable manufacturing process ready for CDMO re-establishment.



Protected value

Composition-of-matter patent to 2035, an exclusively-licensed method-of-use application (approved in Japan), and 5-year NCE exclusivity at launch.

Vepoloxamer reduces damage to non-targeted tissue in animal model exposed to ionizing radiation



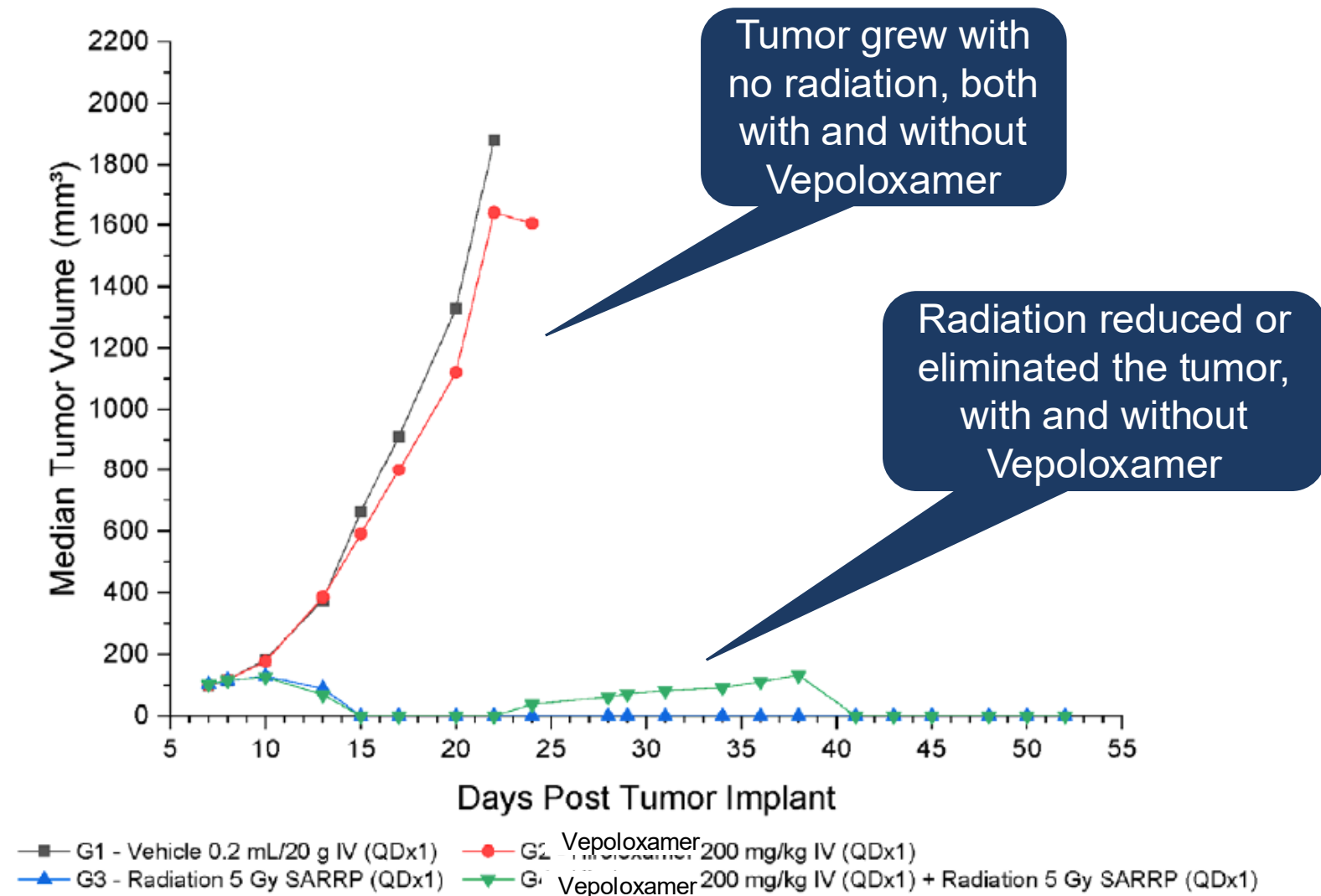
Study Design

- Healthy lung tissue in rats exposed to 20 Gy radiation (targeted to right center lobe of the lung) with and without Vepoloxamer
- Damage (as measured by a thicker alveolar septum) was lessened by the addition of Vepoloxamer prior to radiation

Key findings

- Without Vepoloxamer, radiation caused widespread lung damage that spread far beyond the targeted area
- With Vepoloxamer, the damage was greater in the targeted lobe, and less damage to the tissue that was not targeted

Tumor control: Vepoloxamer does not interfere with radiation efficacy



Study design

- Mouse model with subcutaneous colon carcinoma
- Treated with radiation, with and without Vepoloxamer

Key findings

- Radiation alone shrank or eliminated the tumor in most animals, with the majority still tumor-free at the end of the study
- Adding Vepoloxamer did not blunt that effect

Together with the lung study, these results show the profile of a clinically useful radioprotectant — non-targeted tissue shielded, tumor not.

No approved therapy targets the systemic phase of a major burn

US BURN CARE SPEND

\$10B+

spent each year on burn care in the United States, from injuries that make up 1% of all injuries.

MORTALITY WITH INFECTION

~75%

of patients burned over 40% of total body surface area die with a secondary infection, often progressing to sepsis.

TARGETED THERAPIES

0

approved drugs target or reverse the inflammatory cascade that follows a major burn.

THE STUDY WINDOW

Burn over 20–40% of total body surface area

Below 20% there is no systemic response to modify; above 50%, mortality can mask a treatment effect.

WHAT BURN SURVIVORS FACE AFTER THE INITIAL BURN

The secondary inflammatory response and immune dysfunction that follow the initial burn have not been treated — survivors carry multiple organ failure, susceptibility to infection, prolonged intensive care unit (ICU) stays and lasting disability.

How a burn sets this off is well understood. The problem is that the tremendous inflammatory response it generates affects the entire body, so a drug aimed at any single part of it has never been enough.

Source: Britton GW, Wiggins AR, Halgas BJ, et al. Surg Clin North Am 2023;103(3):415–426. Sauaia A, Moore FA, Moore EE. Crit Care Clin 2017;33(1):167–191.

De-risk in RI-SOM, **build optionality** across the radiation and acute injury indications



LEAD PROGRAM

De-risk the molecule in severe oral mucositis

- Prophylactic design; on board before the insult
- Lean Phase 1b/2a leveraging the existing IND & data
- AI-enabled drug development; smaller company, faster execution, lower cost



PIPELINE BUILD AND GROWTH OPTIONS

Optionality across radiation & acute injury

- Additional indications where radiation therapy leads to damaged healthy cells
- Acute indications driven by downstream tissue damage
- Non-dilutive funding opportunities: BARDA, NIH/NCI, DoD/CDMRP

PATH TO PHASE 2 READOUT IN RI-SOM

2026

Seed close

Team formation, Pre-IND package, CMC readiness



2027

IND-enabling

GMP DP supply, IND filing



2028

First patient in

Phase 1b/2a in SOM begins



2029

Phase 2a data

Top-line readout → exit / license / grow

Experienced leadership team



John Lunger, MBA

PRESIDENT AND CEO

Former Chief Patient Supply Officer at Adaptimmune (NASDAQ: ADAP); delivered TECELRA, the first FDA-approved engineered T-cell therapy for solid tumors. Built three cell & gene therapy plants and helped raise \$300M+. 25+ years across life sciences in small molecule and biologics, operations, strategy, and corporate development.

Adaptimmune · Wyeth · Pfizer · VWR · Merrimack



Arun Kejariwal, MS, MBA

CHIEF OPERATING OFFICER

Biopharma operations & strategy leader with 20+ years translating scientific insight into high-impact therapies. Portfolio, development and asset-leadership roles spanning gene therapy and CNS.

Spark Therapeutics · GSK · Pfizer



Keith Dewedoff

CHIEF FINANCIAL OFFICER

20+ years as CFO across venture-backed and public biotechs. Concurrent CFO / Advisor at Danforth Advisors and Chair of Kaizen Bioscience. B.S. Economics, Northeastern University.

Danforth Advisors · Kaizen Bioscience

Capital-efficient operating model: CEO full-time; CFO, COO, and additional senior leaders operate as a fractional leadership team as appropriate, with execution delivered through specialist consultants and vendors leveraging AI-native infrastructure

TEAM & ADVISORS

Scientific advisory board

KOLs across the lead indication and the priority pipeline.

RI-SOM · TRANSLATIONAL & CLINICAL EXPERTS

Dr. Stephen Sonis, DMD, DMSc

SAB Chair · Harvard, Brigham & Women's Hospital & Dana-Farber Cancer Institute

Defined highly translational models of cancer-therapy tissue toxicity — the basis of modern oral mucositis drug development. Senior academic at Harvard, Brigham & Women's and Dana-Farber. Founder of Biomodels and Primary Endpoint Solutions. 350+ publications cited 39,000+ times.

Dr. Alessandro Villa, DDS, PhD, MPH

Chief of Oral Medicine & Oral Oncology · Herbert Wertheim Cancer Institute

Leading clinician-scientist in oral complications of cancer therapy — LifeRaft's lead indication. Trained at Harvard/Brigham & Women's and NCI/NIH; former UCSF Chief of Oral Medicine. Specializes in oral mucosal disease, dysplasia, and cancer-treatment toxicities. Subject-matter expert for Primary Endpoint Solutions.

TRAUMA & CRITICAL CARE

Dr. Vanessa Nomellini, MD, PhD, FACS

Associate Professor, Burn/Trauma & Critical Care Surgery · UT Southwestern

Bridges Vepoloxamer into burns, trauma & TBI — the priority pipeline. MD/PhD;

Director of Research for Burn, Trauma & Critical Care Surgery at UT Southwestern.

Holds an NIH R35 on immune suppression in critically ill trauma and sepsis patients.

VEPOLOXAMER · INVENTOR

Dr. Martin Emanuele, PhD, MBA

40+ years biopharma R&D & executive leadership · Vepoloxamer originator

Inventor of Vepoloxamer — led the purified poloxamer program through clinical

development. ~40 years in biopharma R&D and executive leadership. Inventor on 30+

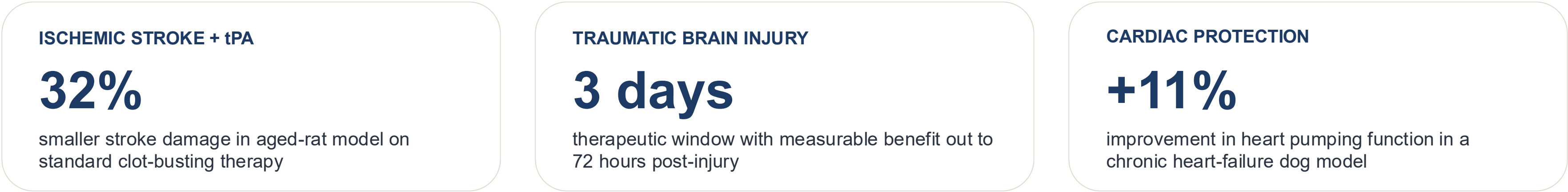
patents; drove 8 first-in-class INDs and 2 NDAs. Closed 20+ partnerships exceeding \$1B in value.

One molecule, many large opportunities

The same membrane-sealing mechanism that protects oral mucosa from radiation injury applies to any condition driven by cell-membrane damage

Scientific validation across multiple indications

40+ independent preclinical studies — peer-reviewed efficacy signals across multiple organ systems. Examples include:



Acute Indications with supporting academic research using P188 or Vepoloxamer — US patients/year

