

TROCAR PHARMA



RADSHIELD™

THE FUTURE OF THERAPEUTIC TECHNOLOGIES
FOR LONGEVITY AND SURVIVAL

TROCAR PHARMA, INC.

RadShield™

YK-4-250 | *First-in-Class Oral GI-ARS Mitigator*

A patented oral medical countermeasure with \$4.5M+ DoD/AFRRI validation.
The only clinical-stage GI-ARS therapy. No FDA-approved competitors. Platform technology

\$2.5M

CAPITAL BRIDGE FUNDING

\$67.5B

Global TAM

88%

Demonstrated 30 Day Overall
Survival

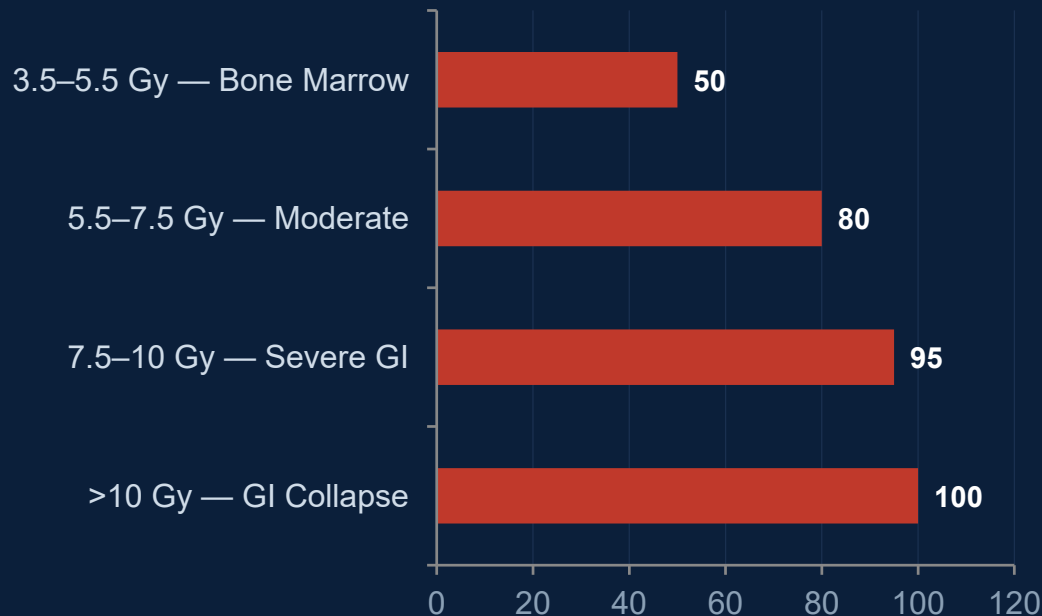


\$2.5M BRIDGE CAPITAL CONVERTIBLE NOTE | 100 Units | \$25K Min | Converts to 20% Discount to \$40M Series A | Accredited Investors Only

Milton Brown MD, PhD — Founder & CEO | derrick@trocarpharma.finance | 702-929-9226

Zero FDA-Approved Therapies for GI-ARS

% Mortality Without Treatment



No Treatments

Zero FDA-approved drugs for GI-ARS. Only supportive care.



100% Fatal >12 Gy

Gastrointestinal collapse — uniformly lethal without intervention.



Threat Escalating

NATO at 2% GDP. Russia, China, N. Korea expanding. Zaporizhzhia.



IV Gap

Existing H-ARS MCMs require IV — impossible in mass-casualty events.



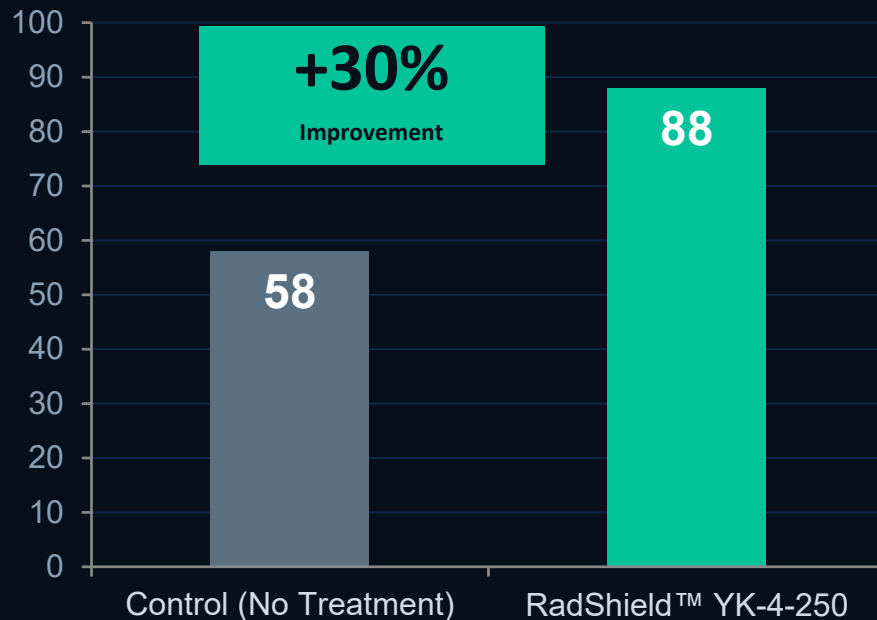
NO FDA-APPROVED TREATMENT EXISTS FOR GI-ARS — RadShield™ IS THE FIRST AND ONLY CLINICAL-STAGE ORAL AGENT

RadShield™ (YK-4-250)

First-in-Class · Oral · Mass-Casualty Deployable



Survival Rate at LD50 (DoD/AFRRI — 14.3 Gy)



ORAL DELIVERY

Tablet/suspension. No IV. Deployable by non-clinical personnel.



24-HR WINDOW

Effective 24 hours post-exposure — Tablet format is field deployable.



DUAL MOA

Angiotensin receptor I blockade and Targeted ROS quenching



EXCLUSIVE IP

Georgetown Univ. License No. 2022-0493 · U.S. & intl. patents



FDA ANIMAL RULE

21 CFR 314.610 · Pre-IND complete · \$1,500–\$6,000/course

\$4.5M+ DoD/AFRRI Studies

88%

Survival at LD50

+30%

vs. 58% Control

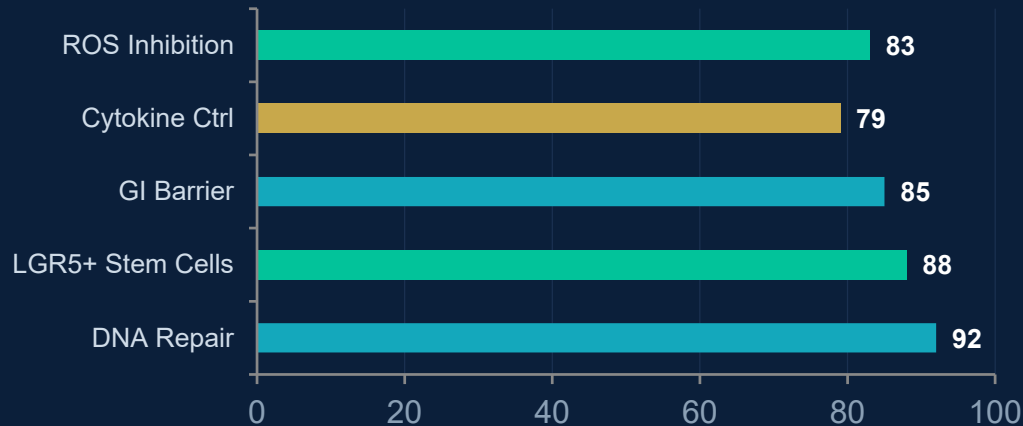
\$4.5M+

Govt-Funded Studies

5-Year

Confirmed Shelf Life

Validated Efficacy Endpoints (DoD/AFRRI)



Key De-Risking Achievements

- ✓ Crystal/polymorph stability — VCU/TCG GreenChem
- ✓ IND-ready formulation — TCG GreenChem
- ✓ PK profiling — TCG GreenChem
- ✓ GMP manufacturing pathway identified
- ✓ SNS storage stability confirmed TCG GreenChem
- ✓ Georgetown exclusive license secured
- ✓ U.S. & international patent protection (Composition and Use)
- ✓ AFRRI evaluation in FDA approved safety vehicle Q2 2026

A Category of One

All approved MCMs treat Hematopoietic ARS (H-ARS) only — none address the more lethal GI-ARS

PRODUCT	INDICATION	ROUTE	STATUS	KEY LIMITATION
Neupogen (G-CSF)	H-ARS only	SC Injection	FDA Approved	No GI-ARS action · Requires medical staff
Leukine (GM-CSF)	H-ARS only	SC / IV	FDA Approved	IV requirement · Cold chain needed
Nplate (romiplostim)	H-ARS (Plts)	SC Injection	FDA Approved	Platelet-only · Injection required
NEUMORA-1	GI-ARS (Pre)	TBD	Early Stage	2–3 year development lag · Route unconfirmed
RadShield™ YK-4-250 ★	GI-ARS ★	ORAL ★	Clinical Stage	FIRST MOVER · Mass-casualty ready · Patent protected



RadShield's oral delivery and GI-ARS indication create a category of one. No IV access needed — uniquely suited for the government's #1 mass-casualty deployment scenario. 2–3 year head start over nearest pipeline competitor.

The Team Behind RadShield™



Milton Brown Sr., MD, PhD, FNAI, FVASEM

Senior Assoc. VP for Research-Office of Research | Prudence & Louis Ryan Endowed Chair of Research | Professor, Internal Medicine | Fellow of the Natl Academy of Inventors (FNAI) | Fellow of the Virginia Academy of Science, Engineering & Medicine (FVASEM) | Macon & Joan Brock Virginia Health Science at Old Dominion University

Founder, Chairman & CEO · Irrevocable Chairman · Class B Super-Voting Shares (10 votes/share)

Pioneered YK-4-250 at Georgetown. Secured exclusive IP license. Oversaw \$4.5M+ DoD/AFRRI studies. Directed FDA Pre-IND meeting. Led NIH NIAID engagement — U01 grant, UAB · UVA · Georgetown · Inova Schar Cancer Institute — 30+ years oncology & translational medicine.

Damian V. Dolland, MBA

Co-Founder



Duke · Morgan Stanley · J.P. Morgan
Capital formation & growth-stage finance

Milton I. Brown, MPS

Strategic Development and
Operations



Business development · Government contracting
DoD & allied agency channels

Derrick Phelps

EVP, Corporate Dev.
Capital Markets



35 Yr. Finance & Capital Formation · Government
Contracting · Corporate Development

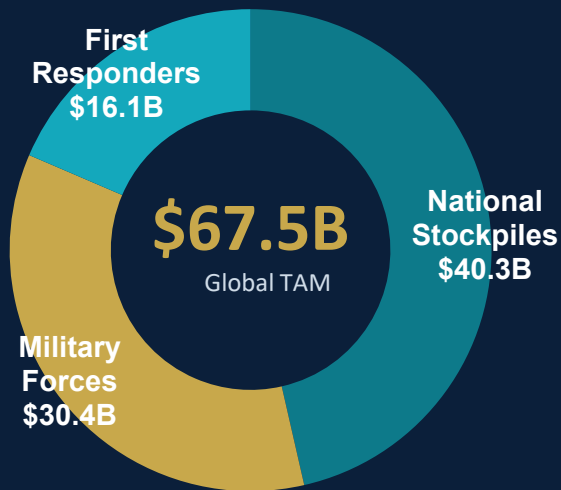
Advisory Board:

DoD/AFRRI radiation biology experts · FDA regulatory advisors · Government contracting specialists · Allied nation defense officials · BARDA procurement advisors · Military leaders · Clinical advisors · Pharma expert advisors

Engaged Counsel: Covington & Burling · Akin Gump · Harness Dickey · Shami Messinger

\$67.5B Global Market

Three Mission-Critical Government Procurement Segments



■ National Stockpiles \$40.3B ■ Military Forces \$30.4B ■ First Responders \$16.1B

National Stockpiles \$40.3B

U.S. SNS Phase 1: \$7.0B

U.S. SNS Full Target: \$35.0B

Allied Nations (Initial): \$5.3B

Annual Replenishment: \$1.75B/yr

Military Forces \$30.4B

U.S. Military Community: \$15.94B

Allied Military Forces: \$14.44B

Nuclear Navy (priority): 22K personnel

First Responders \$16.1B

U.S. Career FR (Phase 1): \$6.9B

Full U.S. FR: \$16.1B

Allied Nations FR: \$4.2B+

A Customer Mandated by Law in 2004

- The Project BioShield Act, enacted by Congress in 2004
- Authorizes HHS/BARDA and DoD to procure FDA-approved countermeasures for the Strategic National Stockpile
- Government pricing: \$2,000–\$8,000 per treatment course for approved radiation countermeasures
- Shelf life drives a recurring 20–25% annual replacement cycle

Approval is the gate. Once RadShield is FDA-approved, it becomes eligible for federal procurement under the Act. Volume and timing are set by contracts, not by statute.

The Same Mandate, Repeated Across Allied Governments

870M+

people in countries with national CBRN
stockpile programs

Allied national stockpile programs exist in South Korea, Japan, the UK, Canada, Australia, Israel, and NATO Europe [source per country to add].

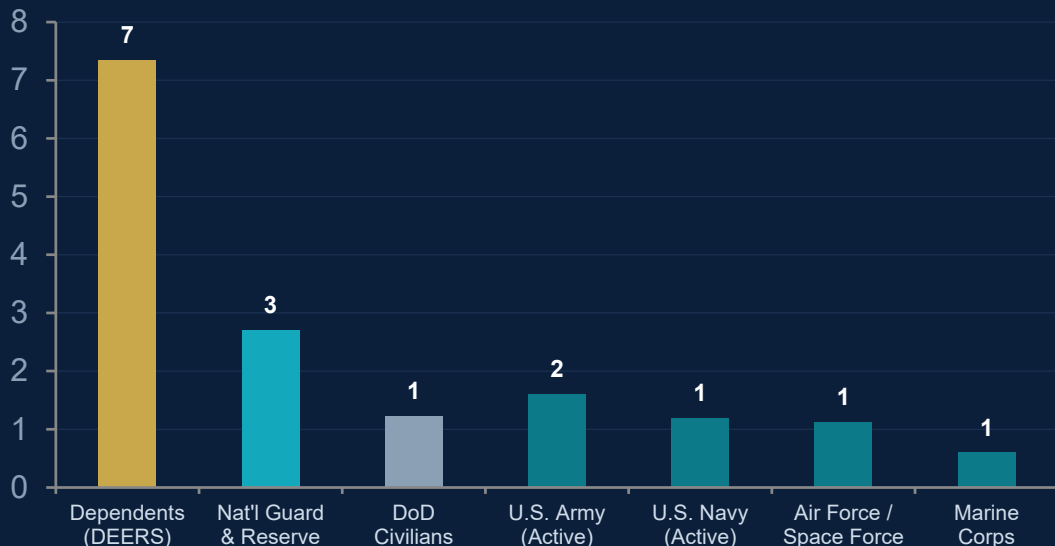
These programs are structured like the U.S. Strategic National Stockpile, and each runs its own regulatory and procurement path.

U.S. approval would support a parallel channel with allied buyers.

Documented Procurement Frameworks

Statutory authority · Established pricing precedent · Active procurement mechanisms

U.S. Military Community — Market Value by Component (\$B, mid-case)



U.S. Military Community Total: \$15.94B (Mid) | 4,904,000 personnel

U.S. SNS Procurement

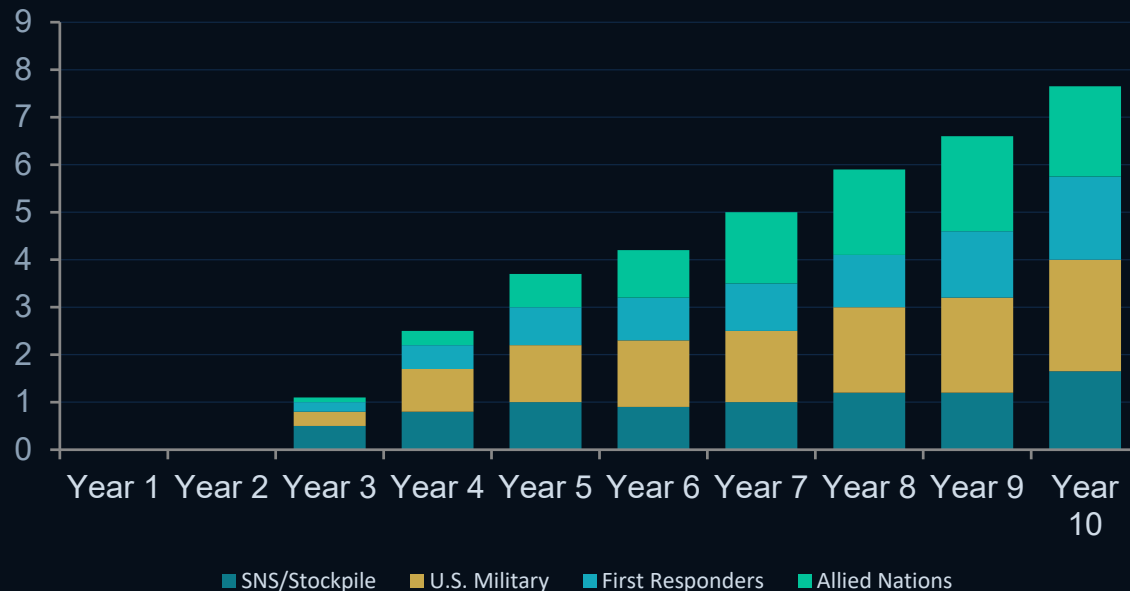
Phase 1 Initial	2M courses	\$7.0B
Full Target	10M courses	\$35.0B
Annual Refill	500K/yr	\$1.75B/yr

Allied Nations (Initial Stockpile)

Japan	\$700M	UK	\$700M
France	\$525M	Germany	\$525M
S. Korea	\$350M	Australia	\$263M

\$36.7B 10-Year Revenue (Mid-Case)

Projected Annual Revenue by Segment (\$B) — Mid-Case



SNS / Stockpile 23%
\$8.25B

U.S. Military 31%
\$11.45B

First Responders 21%
\$7.65B

Allied Nations 25%
\$9.30B

10-Year Total (Mid-Case) **\$36.65B**

\$3,500/course base case within U.S. govt precedent of \$2K–\$8K for approved MCMs

Validated Pathway to Approval

	Pre-IND Meeting	✓ COMPLETE	2020
	Toxicology & Safety	✓ COMPLETE	2024–25
	GLP Toxicology & Safety		2026–27
	IND Submission		2027
	Phase 1/2 + Animal Rule		2027
	NDA Filing		2027–28
	FDA Approval & Launch		2028

Georgetown University Exclusive License

-  Agreement No. 2022-0493 · Executed June 29, 2022
-  Exclusive rights to YK-4-250 formulations
-  Patent portfolio: U.S. & international
-  Polymorph IP secured at VCU
-  Clear IP path to FDA approval

Non-dilutive Funding

\$2.5M NIAID Radiation Countermeasure Consortium Program
\$3.5M NIAID NIH Grant 1U01AI187033-01 funding ·
BARDA & DoD SBIR Phase II pathways open
Congressional support letter on record

Engaged Counsel: Covington & Burling | Akin Gump | Harness Dickey | Shami Messinger

Development Roadmap

COMPLETED



VCU

Crystal/polymorph stability · 5-yr shelf life



TCG GreenChem

Scalable synthesis · IND-ready formulation



TCG GreenChem

ADME/PK studies · Human dosing optimization



AFRRI

\$4.5M+ DoD validation · 88% survival at LD50



NIH/NIAID

1U01 grant awarded · \$3.5M · Priority Score: 30



FDA

Pre-IND complete · Animal Rule 21 CFR 314.600-650 pathway confirmed

PRE-SERIES A FUNDED MILESTONES

Q2 2026

AFRRI GI-ARS Model Re-Validation

Federal Stockpile Gold Standard

Q4 2026

NIH U01 Continuation + DoD SBIR I/II + BARDA Engagement

Grant continuation

Q2 2027

IND Application Filing/Approval

CMC, PK & Safety Package to FDA

Q4 2027

Phase I Clinical Trial

PK/Safety in 20 – 40 patients

Q4 2027

Animal Rule 21 CFR 314.600-650 Pivotal Study

Safety & GI-ARS Efficacy in Mini Pigs

Q2 2028

NDA/BLA Filing

Procurement pathway

Q3 2028

FDA Approval & Stockpile Contract

Commercial launch

Conservative Case: \$600M Enterprise Value

BASIS

2× a single \$300M initial government contract

Comparable: SIGA Technologies, \$402M market cap vs. \$546M single BARDA contract (Edison Group, Mar. 2025)

EQUITY VALUE ON THE BRIDGE

\$16.2M

MOIC ON \$2.5M

~6.5x

THE PRECEDENT: A REFERENCE POINT

On October 4, 2022, HHS/BARDA committed \$290M in Project BioShield funding to a single stockpile purchase of Nplate (romiplostim), approved to treat blood cell injuries that accompany acute radiation syndrome. Nplate does not address GI-ARS, the most lethal form of the syndrome. RadShield (YK-4-250) is a first-in-class oral agent intended for both mitigation and prophylaxis of GI-ARS. Because it addresses an indication no approved product covers, a government price for a product of this kind should reasonably be expected to exceed the Nplate reference. On that basis, a first contract of \$300M is a modest expectation, not a ceiling or a floor.

Base Case: \$1.5B Enterprise Value

BASIS

5× initial contract value, assuming recurring replenishment demand

Comparable: SIGA's BARDA awards and 2025 order book exceed \$1B on one product line

EQUITY VALUE ON THE BRIDGE

\$40.4M

MOIC ON \$2.5M

~16x

THE PRECEDENT

Federal stockpile programs involve repeat purchases. Shelf-life drives replacement, and BARDA/DoD countermeasure programs have produced \$300M+ lifecycle values on single assets. A 5× multiple on the initial contract assumes recurring demand, not a one-time sale.

Platform Scenario: \$5B–\$10B Enterprise Value

BASIS

Management Long-range
Enterprise Model

EQUITY VALUE ON THE BRIDGE

\$135M–\$270M

MOIC ON \$2.5M Not Calculated

We do not present a return multiple for the platform scenario. Its enterprise value depends on assumptions, including pricing, contract escalation, and revenue from unstudied indications, that have not been validated by approval, a signed government contract, or an independent valuation. Only the conservative and base cases are shown, as illustrative scenarios rather than projections.

THE PRECEDENT

Modeled pricing of \$450–\$650 per dose across three buyer tiers, with contractual escalation.

Major pharmaceutical companies have routinely valued first-in-class biodefense assets on contract durability and platform optionality.

The Window Is Open — And Closing

Every month of delay compounds competitive and geopolitical risk



Nuclear Threat at Cold War Peak

Russia openly threatened nuclear use. China, N. Korea, Pakistan all expanding arsenals. NATO at 2% GDP commitment. U.S. Nuclear Policy Review 2022 identifies elevated threat.



Zero FDA-Approved GI-ARS Treatments

Three H-ARS MCMs approved — none for GI-ARS. RadShield is first-in-class. The gap is funded, documented, and politically visible at the highest levels.



Federal Funding Tailwinds

FY2024 HHS ASPR explicitly prioritizes GI-ARS MCMs. NIH U01 awarded. BARDA & DoD SBIR open. Congressional support on record. CBRN funding at historic highs.

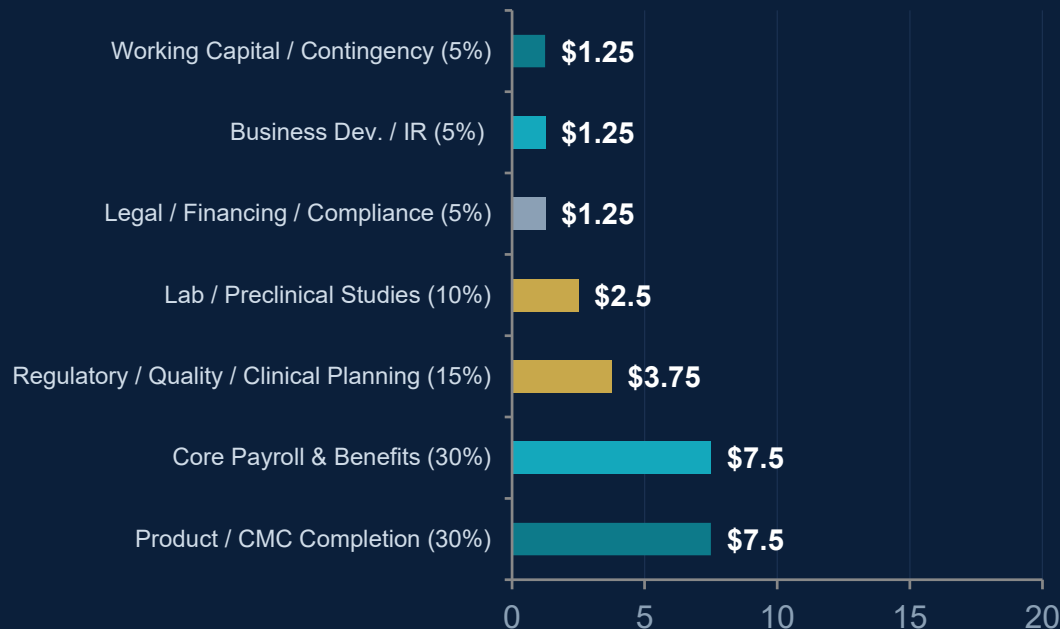


First-Mover Advantage — Protected

2–3 year lead over NEUMORA-1. Oral delivery vs. IV competitors. Georgetown exclusive license. Pre-IND complete. AFRRRI relationship and patent portfolio protect position.

\$2.5M BRIDGE Pre- A — Capital Deployment

BRIDGE PRE- A \$2.5M — Allocation by Category (100's of Thousands)



Total Raise

\$2.5M

100 Units · Convertible Into Series A @20% Discount
10% Note Rate | 18 Month Maturity | at \$25K/Min.

6.5x–16x

Projected MOIC to first exit
(Base & Conservative level EVs only)

Capital Strategy

*The \$2.5M bridge funds the milestones that set the Series A valuation, not the clinical program itself. Proceeds will cover the AFRRRI GI-ARS model re-validation, the NIH U01 continuation, and government engagement under DoD SBIR and BARDA, along with working capital to reach the Series A close. Phase 1 and the Animal Rule pivotal study are funded from the \$40M Series A.

8 Reasons to Invest in Trocar Pharma

1

First-in-class oral GI-ARS countermeasure

No approved competitors. Category-defining product.

2

\$36.7B 10-year revenue projection (mid-case)

Conservative basis on govt procurement frameworks.

3

Government procurement — statutory authority

Project BioShield + HHS ASPR mandate = captive buyers.

4

De-risked development pathway

FDA pre-IND ✓ · 88% AFRRRI efficacy ✓ · Therapeutic index >5 ✓ · Validate MOA.

5

Diversified platform — 20+ therapeutic areas

Dual ROS and RAS mechanism: IBD, fibrosis, oncology, antiviral, hypertension, medical radiation, NAFLD, oral mucositis, glaucoma, cataracts, PTSD, anxiety, sleep dysfunction, arteriosclerosis, psoriasis, PCOS, hidradenitis suppurativa

6

Strategic partnerships across dev chain

DoD/AFRRRI · Georgetown · VCU · TCG GreenChem · ODU

7

Exclusive IP — U.S. & international coverage

Georgetown License No. 2022-0493 · Polymorph protection.

8

Geopolitical environment accelerating CBRN \$

NATO 2% GDP · Nuclear Policy Review · Historic highs.

TROCAR PHARMA, INC.

Invest in the First Oral Radiation Shield.



The only FDA-eligible, oral, first-in-class mitigator for GI Acute Radiation Syndrome.

Offering: \$2.5M Bridge Capital Raise · 10% Convertible Note 18 Mo. Term · Converts @ 20% Discount into Series A Units · \$25K Minimum · Accredited Investors Only

Founder: Milton Brown MD, PhD — Founder & CEO

Contact: derrick@trocarpharma.finance · 702-929-9226

Address: Assembly, 400 Granby St., Norfolk, VA 23510

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