

Investor Presentation

Pioneering Differentiated Radiotherapies for Patients with Unmet Needs

November 2025

ATNM: NYSE AMERICAN

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Transformative Pipeline for Solid Tumors, Hematology & Conditioning

Four First-in-Class Radio Programs Each Addressing Blockbuster Market Opportunities

Indication

Program		indication	Stage of Development			
			Preclinical	Phase 1	Phase 2	Phase 3
Solid Tumors	ATNM-400 (Undisclosed Target)	Prostate, Lung & Breast Cancers				
	Actimab-A with PD-1 inhibitors	MDSC Depletion in Solid Tumors				
	Undisclosed Targets / Theranostics	Solid Tumors				
AML and	Actimab-A + CLAG-M	Fit R/R AML	Seeking Collaborator for Ph 2 /3			
Hematology	Actimab-A Triplet Combo	Frontline AML				
	Actimab-A Combinations (FLT3, IDH 1/2, Menin expand backbone profile)	R/R AML				
Conditioning	Iomab-ACT Prior to Commercial CAR-T	Hematological Malignancies				
	Iomab-ACT Prior to BMT / GeneTx	Sickle Cell Disease				
	Iomab-B BMT Targeted Conditioning	Active R/R AML	Seeking U.	S. Partner fo	or Ph 2/3	



Drogram

Stage of Development

2025 Reboot: Reprioritized, Revitalized Programs Drive Value Creation

Solid Tumors ATNM-400 & MDSCs

- ✓ ATNM-400: novel, multi-indication first-in-class Ac-225 radiotherapy
- ✓ ATNM-400 target associated with disease biology including progression and treatment resistance in prostate, lung and other solid tumors
- ✓ Superior efficacy compared to blockbuster standard-of-care therapies, overcomes treatment resistance and synergistic potential in combination
- Large market expansion opportunity with Actimab-A in solid tumors targeting MDSCs with PD-1 inhibitors

Heme/Conditioning Actimab-A & Iomab-B/ACT

- √ 3 programs in AML therapeutics and conditioning creates a multi-billion dollar opportunity
- ✓ Aligned with FDA on Phase 2/3 studies for Actimab-A and Iomab-B; seeking partnerships
- ✓ NCI CRADA supports broad development leveraging mutationagnostic backbone therapy potential of Actimab-A
- Iomab-ACT actively recruiting patients across 3 clinical trials to address high unmet needs of commercial CAR-T and sickle cell disease markets

Radio Capabilities R&D & Infrastructure

- In-house R&D responsible for highly differentiated and growing pipeline
- Strong radiochemistry and translational biology capabilities
- ✓ Large and comprehensive IP estate encompassing 240 patents
- Establishing in-house radiotherapy production to enhance operating efficiencies
- ✓ Exploring collaborations to leverage Ra-226 inventory and Ac-225 cyclotron production technology

Cash runway into 2028 enables value creation via clinical milestones, pipeline advancement and technology deployment



Actinium is Well Positioned in the Current Radio Landscape

The present radio landscape features largely undifferentiated programs by 50+ smaller companies and 6 Big Pharma's who are on the hunt for differentiated assets as their wave of acquisitions has left them with large infrastructure but relatively sparse and undifferentiated pipelines

\$17 Billion in High-ROI M&A Focused on Later-Stage PSMA **Prostate & NETs Assets and Manufacturing Infrastructure**

Big Pharma's acquired radiotherapy presence

300,000+

sq. feet of underutilized radio mfg. infrastructure

approved therapies

Pluvicto, Lutathera & Xofigo

targets dominate pipeline PSMA, SSTR2 & FAP

2024 & 2025:

\$8 Billion of Novel Program & Platform Focused Transactions





AKTIS











\$2.7 B Peptide platform

\$1.1 B Miniprotein platform

\$1.75 B DLL3 & B7-H3 & platform

\$1.1 B **GCPR** program

\$1.35 B ACP3 prostate program

Recent Radio Transactions Indicate Trend to **Heavy Investments into Differentiated Programs**

ATNM-400: First-in-Class, multi-indication, Ac-225 solid tumor program

✓ Offers pipeline diversity and novel target aligned with pharma's existing oncology franchises

Actimab-A: MDSC Depletion in combination with PD-1 inhibitors

✓ Offers strong commercial synergy, existing market protection via new IP and potential new solid tumor indications

Robust in-house R&D capabilities

Opportunity to further expand novel radio programs

Establishing in-house manufacturing

Can enable seamless integration and clinical execution

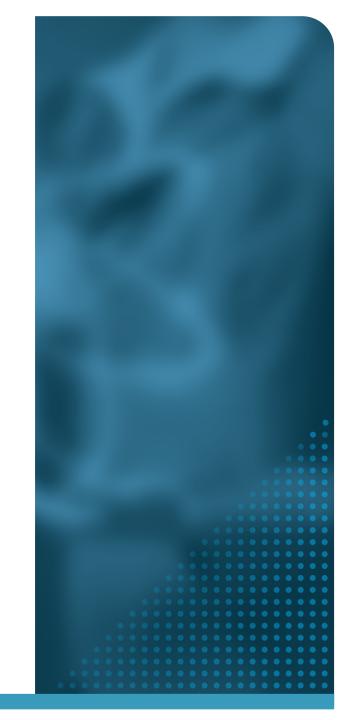




Solid Tumors: ATNM-400 & Actimab-A

ATNM-400: First-in-class, multi-indication Ac-225 targeted radiotherapy supported by robust preclinical data

Actimab-A: Potential to synergize with PD-1 and other immune checkpoint inhibitors in solid tumors by depleting CD33+ MDSCs



ATNM-400: Highly Differentiated, Pan-Tumor First-in-Class Ac-225 Therapy

Blockbuster potential supported by compelling data in the largest solid tumor indications with potential across treatment settings



Prostate Cancer

~300K annual cases in the U.S. 1.5 million cases globally

- ✓ Superior efficacy compared to 177Lu-PSMA-617 (active agent in Pluvicto[®]) and ARPI enzalutamide (Xtandi[®])
- Overcomes treatment resistance and is synergistic with enzalutamide the leading ARPI with \$5.9 billion in sales
- ✓ PSMA-independent activity can address large segment of patients not eligible for or progressing on 177Lu-PSMA-617 therapy
- ✓ Prostate cancer represents a multi-billion market opportunity: ARPI sales of \$10+ billion and Pluvicto[®] sales of \$1.39 billion in 2024



Lung Cancer

~200K annual cases in the U.S. 2+ million cases globally

- √ 3x-5x greater tumor growth inhibition compared to 1st, 2nd and 3rd line approved EGFR therapies, a highly competitive space with sales of \$7 billion
- ✓ Synergistic with 1st line therapy osimertinib with complete tumor regression in 100% of tumor bearing animals
- ✓ Clinical rationale for combination proven by study showing synergy of EBRT + osimertinib improved PFS of 32.2 months compared to 20 months with osimertinib
- ✓ ATNM-400 offers a more targeted, safer delivery of synergistic radiation



Breast Cancer

~300K annual cases in the U.S. 2+ million cases globally

- Anti-tumor activity in tamoxifen (hormone therapy) and trastuzumab (HER2 targeted therapy) resistant breast cancer
- ✓ Hormone receptor-positive, HER2 negative (HR+/HER2-) accounts for 70-75% of breast cancer cases
- √ Trastuzumab (Herceptin®, Roche and biosimilars) generated sales of \$4 billion in 2024
- ATNM-400 breast cancer to be presented at the San Antonio Breast Cancel Symposium in December 2025

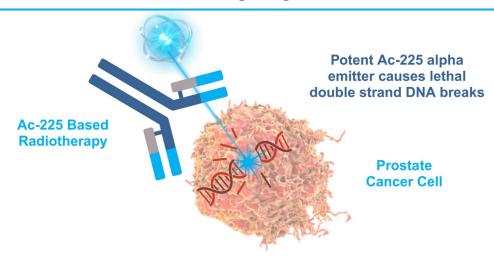


Next-Generation, Non-PSMA Prostate Cancer Radiotherapy

High Unmet Needs Exist in Prostate Cancer

- ~5-7% of patients have metastatic disease at diagnosis and ~20-30% will progress to metastatic disease (mCRPC)¹
- Up to 30% of mCRPC patients have low or no PSMA expression, up to 60% of patients have at least 1 PSMA-negative lesion and 40-60K patients progress on ARPI therapy annually²
- Significant opportunity for ATNM-400 as a monotherapy, in combination or alternative for patients who do no respond or post-treatment failure

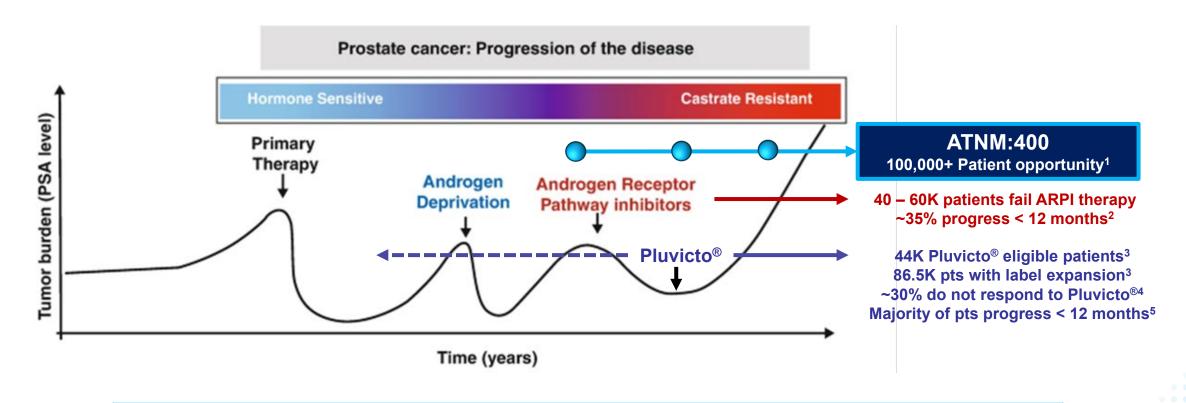
First-in-Class Ac-225 Therapy Directed Against Disease Driving Target



Target Considerations	ATNM-400	PSMA
Implicated in prostate cancer cell survival	~	X
Linked to rapid disease progression	~	×
Drives shorter time to castration resistance	~	X
Overexpressed in patients resistant to ARPI therapy	~	X
Expressed in multiple solid tumors	~	X



ATNM-400 Market Opportunity in Prostate Cancer



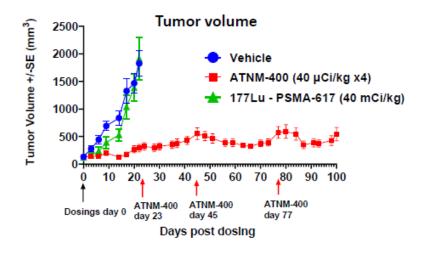
ATNM-400: Multiple Opportunities Across Prostate Cancer Treatment Journey

2024 Sales: ARPIs: \$10+ billion | Pluvicto®: \$1.39 billion6

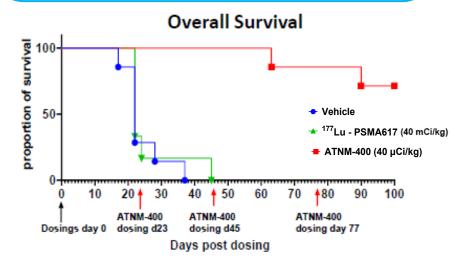


Transformative Therapeutic Potential for Prostate Cancer

Superior Tumor Control Compared to Lu-177-PSMA-617, the Active Agent in Pluvicto®



ATNM-400 Improved Survival Versus Lu-177-PSMA-617

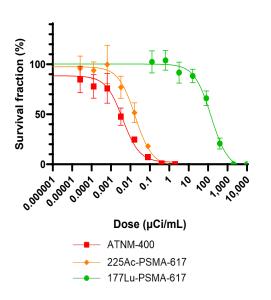


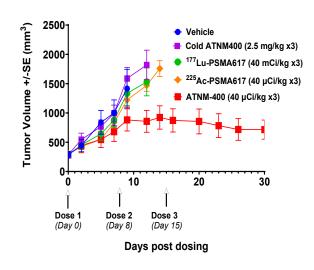
Data supports potential of ATNM-400 in mCRPC setting where Pluvicto generated \$1.39 billion in sales in 2024 to become the first blockbuster radiotherapy



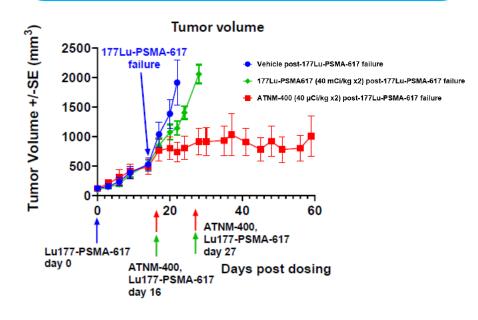
More Potent than Ac-225 PSMA, Overcomes Lu-177 Resistance

ATNM-400 Produced Greater Cell Killing and Tumor Control Compared to Ac-225-PSMA-617





Sustained Tumor Growth Inhibition Post Lu-177-PSMA-617 Failure

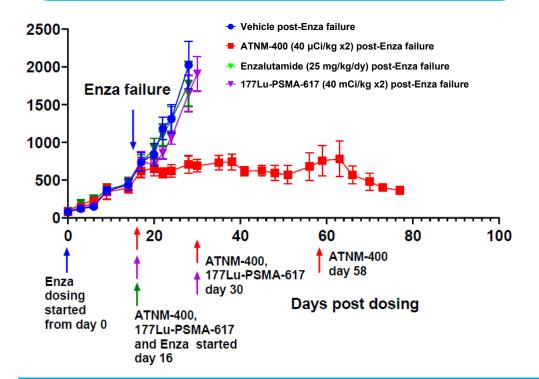


Enhanced prostate tumor cell killing and ability to overcome resistance providing attractive opportunity for future development

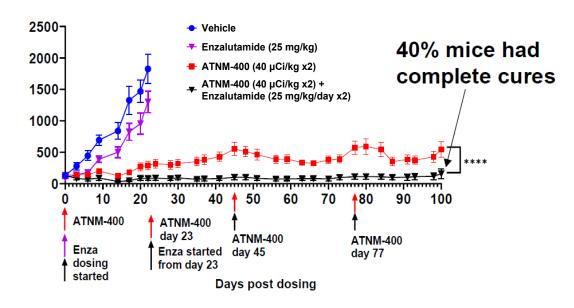


Opportunity as ARPI Alternative or in Combination

ATNM-400 More Efficacy Compared to Enzalutamide and Lu-177-PSMA-617 in Resistant Prostate Cancer



ATNM-400 has Durable Efficacy in Enzalutamide Resistant PCa Model and has Combination Activity



Implications of ATNM-400's target in prostate cancer disease biology supported by greater tumor control with ATNM-400 + Enzalutamide versus either agent alone



Significant Market Expansion Opportunity Across NSCLC

Results Strongly Support ATNM-400's Differentiated Profile in the Highly Competitive NSCLC Space and Potential Across 1st, 2nd & 3rd Line Settings, Alone or In Combination with Successful Therapies Competing for Market Share

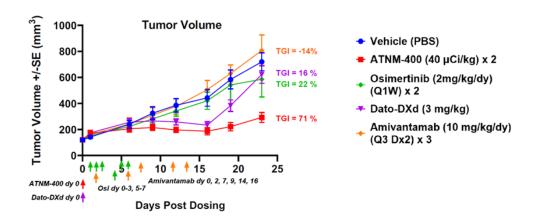
- NSCLC accounts for ~85% of the 2+ million lung cancer cases globally
- ATNM-400's target antigen is overexpressed in NSCLC, associated with poor prognosis and linked to treatment resistance
- AstraZeneca and Johnson & Johnson are competing for market share with TAGRISSO® and RYBREVANT® combinations
- ATNM-400 offers a novel EGFR + radiotherapy combination supported by preclinical and clinical data

	EGFR - 1 st Line	EGFR - 2 nd Line	EGFR - 3 rd Line
ATNM-400 ¹ Efficacy	✓ 3x Superior TGI ✓ Synergy in combination	✓ 5x Superior TGI	✓ 85% greater TGI
Therapy & Mechanism	TAGRISSO® osimertinib EGFR-TKI	DATROWAY® Dato-DXd Trop-2 ADC	RYBREVANT® amivantamab EGFR-cMET Bispecific
Company	AstraZeneca (AZ)	Daiichi Sankyo/AZ	J&J
Radiotherapy Presence	Yes - Prostate Cancer	Yes - Prostate Cancer	Yes - Prostate Cancer

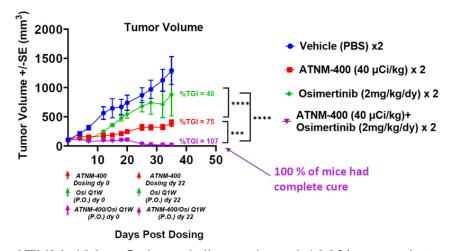


Compelling Efficacy Across All EGFR-Mutant NSCLC Treatment Settings

ATNM-400 outperformed 1st, 2nd & 3rd line therapies by 3-5x and had robust synergy in combination with 1st line osimertinimb that is supported by clinical data



- Head-to-head study in NCI-H1976 human lung cancer models
- ATNM-400 had 3-5x greater tumor growth inhibition compared to EGFR therapies



- ATNM-400 + Osimertinib produced 100% cures in tumor bearing animals
- ATNM-400 target is overexpressed post-Osimertinib treatment

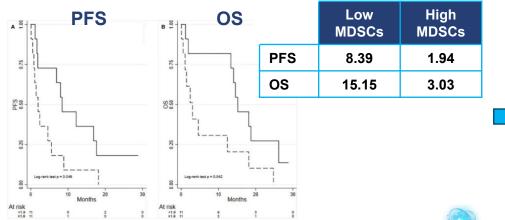
Clinical rationale for combination supported by study showing synergy of EBRT + osimertinib improved PFS of 32.2 months vs. 20 months with osimertinib, Ac-225 is 4–8x more biologically lethal than low-energy EBRT that may translate to higher response rates, lower toxicity, and entry into new treatment segments

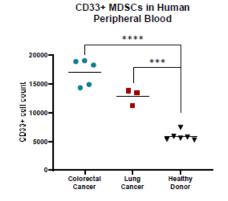


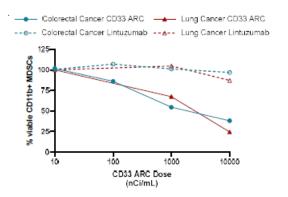
Actimab-A: Ability to Deplete MDSCs Provides Solid Tumor Opportunity

NSCLC Patients with Low-MDSCs had Significantly Longer PFS and OS with PD-1 Inhibitor Therapy¹

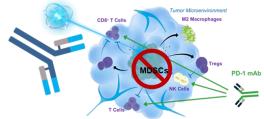
Actimab-A Can Deplete CD33+ MDSCs in the Tumor Microenvironment to Reactivate the Immune System







MDSCs: only immune cell subtype to show a statistically significant association with tumor response¹



MDSCs limit efficacy of PD-1 inhibitors, Actimab-A offers an opportunity to extend use and expand indications

Mechanistic synergy and clinical data strongly support the approach of depleting MDCSs with Actimab-A prior to PD-1 inhibitor therapy

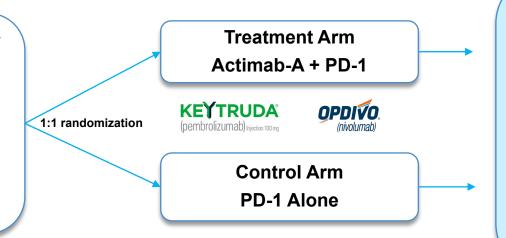


Actimab-A Solid Tumor Program: Clinical Trials Overview

Program Comprised of Several Randomized, Head-to-Head Controlled Clinical Trials in HNSCC and NSCLC

Patient Population

- Relapsed or refractory locally advanced metastatic HNSCC and NSCLC
- No prior checkpoint inhibitor therapy
- Adults ≥18 years
- PD-L1 expression



Endpoints:

- Evaluate Safety, tolerability of Actimab-A with Keytruda® or OPDIVO®
- Evaluate ORR, PFS and OS

Biomarkers:

- Evaluate pattern of depletion of CD33+ MDSCs in TME & Peripheral Blood
- T-Cell activity in Peripheral Blood

Proof of Concept Clinical Data Expected in 2026



Blockbuster Opportunity to Enhance PD-1 outcomes

PD-1 Inhibitors Generated \$40+ Billion in Sales in 2024 Even with Limited Responses in Multiple Indications That May be Addressed in Combination with Actimab-A

Commercial Status	MDSC-rich Tumors	Actimab-A Opportunity	Addressable Market/Value Proposition
Approved PD-1's	Lung (NSCLC)		
KEYTRUDA OPDIVO	Melanoma	Re-sensitize tumors to PD-1	
(pembrolizumab) Injection 100 mg (nivolumab)	Renal (RCC)	inhibitors	Expand or Protect via new IP
+ others	Colorectal (CRC)	 Extend duration of PD-1 inhibitor treatment 	Existing \$40 Billion Market ¹
Only KEYTRUDA Approved	Breast (TNBC)	Improve patient outcomes	
KEÝTRUDA® (pembrolizumab) Injection 100 mg	Head and Neck (HNSCC)		
Limited Clinical Responses, No Approvals	Pancreatic	Sensitize tumors to PD-1 inhibitors	
	Prostate	 Expand PD-1 inhibitor treatment to currently unaddressed high-unmet 	400,000+ Patients in the U.S.
(pembrolizumab) Injection 100 mg (nivolumab)	Ovarian	need disease indications	Annually ²
	Glioblastoma	Improve patient outcomes	



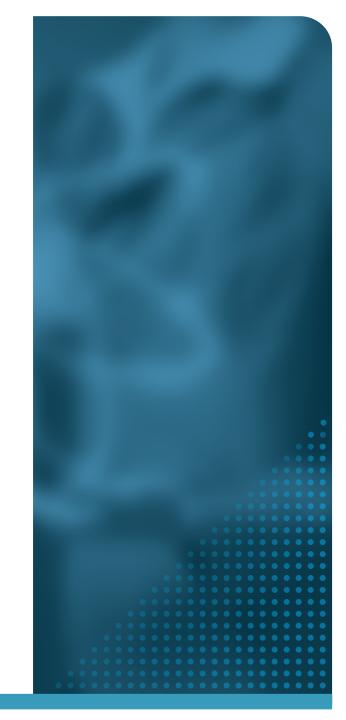


Hematology Portfolio: AML Therapeutics & Targeted Conditioning

Actimab-A: Phase 2/3 ready, mutation agnostic Ac-225 AML therapy

Iomab-B: Phase 2/3 ready BMT targeted conditioning agent

Iomab-ACT: Potential universal conditioning to improve access and outcomes for cell & gene therapies



Compelling Opportunity for Heme Portfolio Partnering or Licensing

Late-stage trials and differentiated radio assets enables near-term franchise opportunity in heme malignancies with high unmet needs

Heme Portfolio: 2 Phase 2/3 trials and 4 Phase 1 trials supported by CRADA

Iomab-B BMT Targeted Conditioning: R/R AML	Phase 2/3
Actimab-A + CLAG-M: R/R AML	Phase 2/3
Actimab-A Triplet Combo: Frontline AML	Phase 1
Actimab-A High-risk MDS	Phase 1
Actimab-A Combinations (FLT3, IDH 1/2, Menin inhibitors)	Planned
Actimab-A: AML Maintenance	Planned

Value Proposition: Addresses the Entire AML Treatment Journey with Additional Potential in MDS: 110,000 Patients in U.S. & EU

Indic	ation	Therapy		ВМТ	Post-BMT
		Front Line	R/R	Conditioning	Maintenance
AML:	88K pts				9
MDS:	: 23K pts	Potential Expansion		Potential Expansion	Potential Expansion

Key Value Drivers

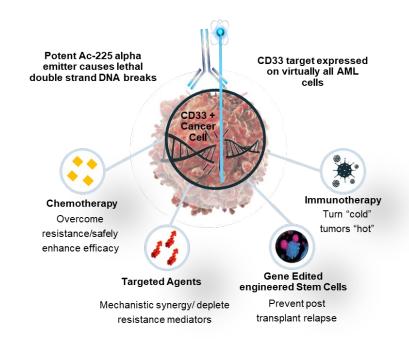
- Clinical Validation: Over 500 patients treated with Iomab-B & Actimab-A
- Concentrated Commercial Market: Patient population largely treated in top 100 quaternary care centers in U.S. & EU
- Favorable Commercial Dynamics: Strong synergy across Actimab-A, Iomab-B and Iomab-ACT
- Unmet Medical Need: Provides opportunity for commercial success with the only radiotherapies in development for these blockbuster markets

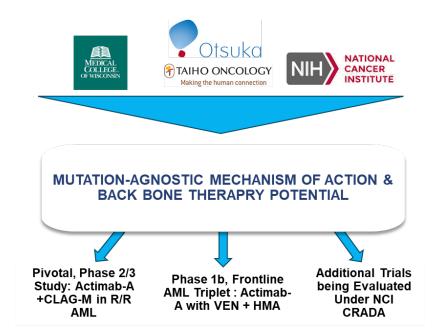


Actimab-A Program: Bolstered by Strong Clinical Data and NCI CRADA

Backbone Therapy Potential with Mutation Agnostic Mechanism of Action and Synergistic Potential

Clinical Experience Supports Late-stage Trials and Broad Development Enabled by Balance Sheet Sparing CRADA



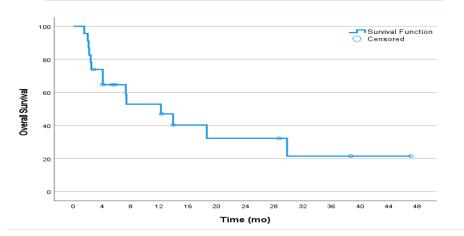


Opportunity for multiples clinical milestones and data readouts from studies expected in 2026 and beyond



Actimab-A + CLAG-M: Results Support Phase 2/3 Trial in R/R AML

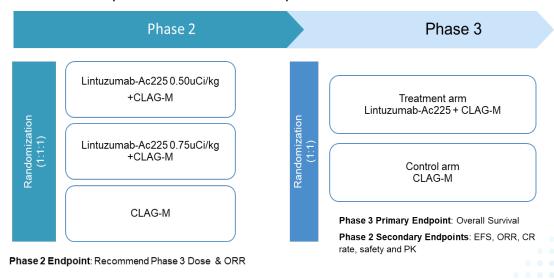
High Rates of MRD Negativity and Improved Survival Outcomes in High-Risk R/R Patients¹



Patient segment	MRD Negativity	Median Overall Survival
1 st /2 nd Salvage (n=14)	80%	18.4 mo.
TP53mut (n=13)	83%	9.6 mo.
Prior Venetoclax (n=13)	100%	7.3 mo.

Phase 2/3 Trial to Enroll Patients with 1st or 2nd Salvage R/R AML, Group Had Best Outcomes in Phase 1b Trial

- 24-month median overall survival in the 70% of patients who proceeded to a BMT with Actimab-A + CLAG-M
- Results compare highly favorably to <2 mo. 4 mo. overall survival in TP53+ or prior Venetoclax treated patients^{2,3}

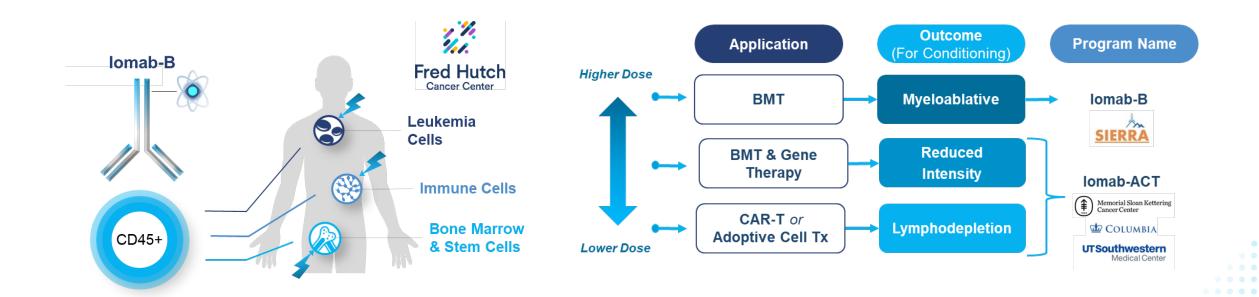


Aligned with FDA on Phase 2/3 trial, actively seeking collaborator



Iomab-B/ACT: Improve BMT, Cell & Gene Therapy Access and Outcomes

Only Clinical-Stage CD45 Targeted Conditioning Program in Development; Multi-indication Potential

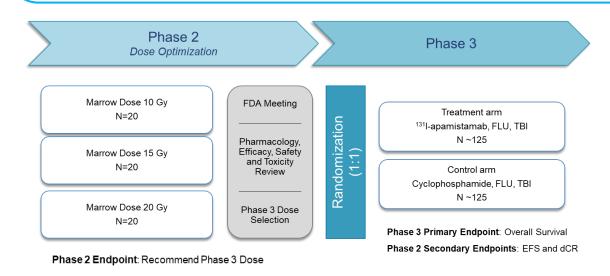


3 active Iomab-ACT clinical trials with data expected in 2026 and Phase 2/3 trial for Iomab-B available for partnering



Iomab-B: Phase 2/3 Trial Ready for Initiation

FDA Aligned on Trial in Expand Patient Population to Include All R/R AML Patients age 18+ with Further Market Expansion Potential Supported by Data in 5 Additional Disease Indications



Long-lived IP:

Composition of matter patents extend to 2038

Strong Existing Use Base:

24 SIERRA sites continue to have strong interest in Iomab-B

Regulatory Clarity:

 Potential to leverage Phase 2 results with SIERRA data

Market Opportunity:

 ~ 150,000 addressable patients across 6 indications via improved BMT conditioning





SIERRA trial supports Phase 2/3 in expanded population; Actively seeking partner



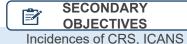
Ongoing Iomab-ACT Trials Expected to Inform Pivotal Studies

Commercial CAR-T Phase 1B/2 Trial

Trial Initiated; **Initial PoC** Enrollment Actively Data: **N** = 30 patients Recruiting Expected: 2026 (single arm)



Safety, tolerability, and efficacy of Iomab-ACT conditioning with CAR-T



In vivo persistence and expansion of CAR-T cells



Recruiting

Enrollment

BMT & Gene Therapy Conditioning –

Sickle Cell Disease BMT Phase 1 Trial

N = 24 patients

Data

Initial PoC

Expected: 2026



PRIMARY & SECONDARY OBJECTIVES

Safety assessment by evaluating graft failure, grades III-IV GvHD, or death at 100 days

Advance to gene therapy conditioning



UTSouthwestern Medical Center

Farrukh Awan, MD Professor of Internal Medicine



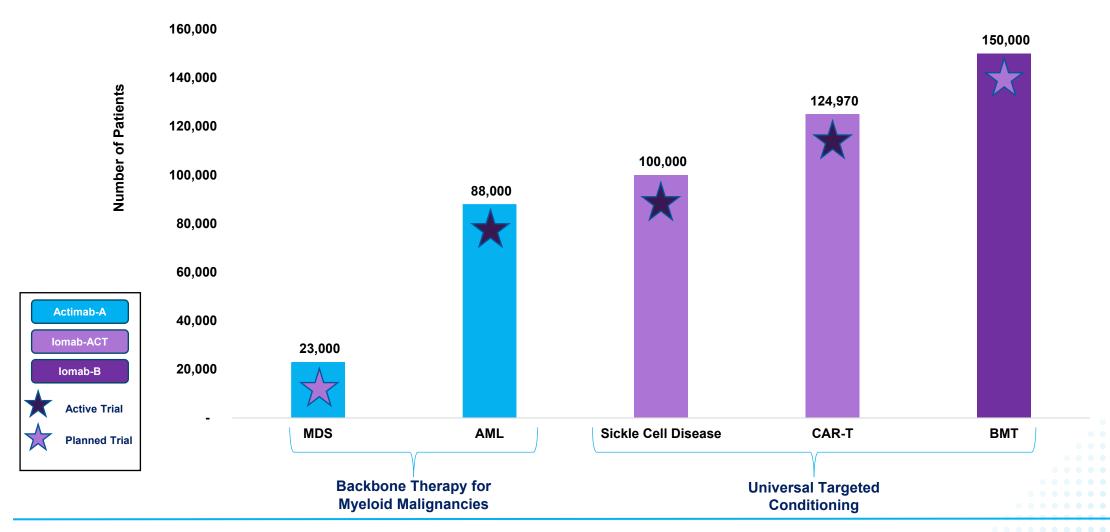
COLUMBIA COLUMBIA

Markus Mapara, MD Professor of Medicine

Early POC Data expected 1H:2026



Blockbuster Opportunities for Three First-in-Class Heme Radiotherapies







R&D, Ac-225 Manufacturing Technology, and Core Capabilities

Proven Actinium-225 Manufacturing Technology and In-House, Cutting-Edge R&D Synergize with Wide-Ranging Experience Navigating the Radiotherapeutic Supply Chain to Provide End-To-End Expertise

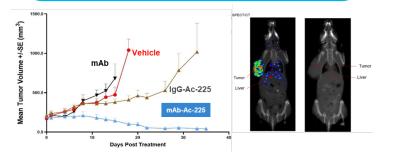


Proven End-to-End Radiotherapeutic Development Expertise

In-house R&D Facility with in vitro & in vivo Capabilities



Demonstrated Leading-Edge Preclinical Radiochemistry & Translational Biology R&D



End-to-end Clinical Supply Chain Established at ~50 leading Hospitals & Redundant Isotope Supply









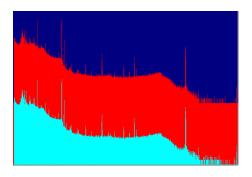




Proprietary Cyclotron Manufacturing
Technology Enables Commercial-Scale,
Low-Cost AC-225 Production



Radiochemical Purity Equivalent to Gold-Standard Thorium Method & No Long-Lived Contaminants



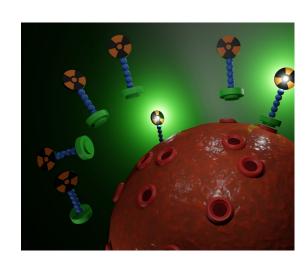


Innovation Focused R&D Yields Differentiated, High-Value Programs

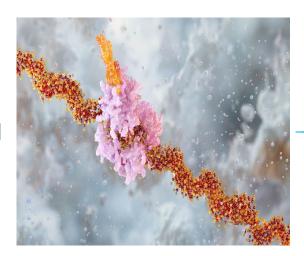
Radiochemistry Expertise and Know-how

Strong Translational Biology Capabilities

Highly Differentiated, First-in-Class Programs







ATNM-400

Novel, Non-PSMA Targeting Ac-225
Prostate Cancer Program

Actimab-A

Mutation Agnostic, First-in-class CD33-Ac-225 AML Therapeutic

Iomab-ACT

Next-generation Targeted Conditioning for Cell & Gene Tx

Leading-edge radiotherapy R&D driving near-term opportunities with strong IP portfolio of 240 patents supporting future value creation



Outlook for Novel Targeted Radiotherapy Pipeline

Solid Tumors ATNM-400 & MDSCs

- Present additional solid tumor data for ATNM-400
- Further advance ATNM-400 preclinically to support first-in-human clinical trials
- Commence patient enrollment in initial Actimab-A MDSC clinical trials in combination with KEYTRUDA and OPDIVO
- Generate clinical proof of concept data in HNSCC and NSCLC with Actimab-A and KEYTRUDA and OPDIVO

Heme/Conditioning Actimab-A & Iomab-B/ACT

- Initiate Actimab-A Phase 2/3 trial in r/r AML, seek partner
- Generate initial clinical data in frontline AML trial under CRADA
- Initiate additional clinical trials in myeloid malignancies under CRADA
- Proof of concept data from UTSW commercial CAR-T study
- Initial results in Sickle Cell Disease BMT study and expansion into Gene therapy conditioning

Radio Capabilities R&D & Infrastructure

- Progress additional differentiated solid tumor assets towards clinical development with strong supportive preclinical data packages
- Continue to support clinical programs and pipeline expansion
- Operationalize in-house radiopharmaceutical production capabilities
- Secure partnerships for Ac-225 cyclotron technology

Strong balance sheet with cash runway into 2028 enables several milestones with first-in-class programs across multiple blockbuster opportunities





Thank You

Actinium Pharmaceuticals, Inc.

ATNM:NYSE AMEX

