

TARGETING CANCER

New Science. New Cancer Therapies. New Hope.

Company Overview – August 2024

FORWARD-LOOKING STATEMENTS



This presentation contains forward-looking statements (including within the meaning of §21E of the U.S. Securities Exchange Act of 1934, as amended, and § 27A of the U.S. Securities Act of 1933, as amended). Forward-looking statements, which generally include statements regarding goals, plans, intentions and expectations, are based upon current beliefs and assumptions of Oncternal Therapeutics, Inc. ("Oncternal") and are not guarantees of future performance. Statements that are not historical facts are forward-looking statements, and include statements regarding the expected timing for achieving key milestones, the timing of regulatory communications and completing and announcing results of clinical trials of Oncternal's product candidates, the anticipated market potential, duration of patent coverage, ability to obtain and maintain favorable regulatory designations, potential accelerated approval pathways for Oncternal's product candidates and preclinical programs, and Oncternal's anticipated cash runway.

All forward-looking statements are subject to risks and uncertainties, including risks and uncertainties inherent in Oncternal's business, including risks associated with the clinical development and process for obtaining regulatory approval of Oncternal's product candidates such as potential delays in the commencement, enrollment and completion of clinical trials; the risk that results seen in a case study of one patient likely will not predict the results seen in other patients in the clinical trial; the risk that interim results of a clinical trial do not predict final results and that one or more of the clinical outcomes may materially change as patient enrollment continues, following more comprehensive reviews of the data, as follow-up on the outcome of any particular patient continues, and as more patient data become available; and other risks described in Oncternal's filings with the U.S. Securities and Exchange Commission ("SEC"). Except as required by applicable law, Oncternal undertakes no obligation to revise or update any forward-looking statement. All forward-looking statements in this presentation are current only as of the date on which the statements were made. Additional factors that could cause actual results to differ materially from those expressed in the forward-looking statements are discussed in Oncternal's filings with the SEC.

ONCT-534, ONCT-808 and zilovertamab are investigational product candidates that have not been approved by the U.S. Food and Drug Administration for any indication.

This presentation includes certain information obtained from trade and statistical services, third-party publications, and other sources. Oncternal has not independently verified such information and there can be no assurance as to its accuracy.

Corporate Highlights



ONCT-534: DUAL-ACTION ANDROGEN RECEPTOR INHIBITOR (DAARI)

- No DLTs or concerning AEs in Phase 1 of R/R mCRPC study; 1200 mg cohort enrolled and treated
- Fast-Track designation granted by U.S. FDA
- Active in preclinical prostate cancer models of ARPI resistance, including AR splice variants such as AR-V7, LBD mutations, and AR overexpression

ONCT-808: AUTOLOGOUS CAR T CELL THERAPY TARGETING ROR1

- Encouraging clinical activity in Phase 1/2 clinical study in aggressive B-cell NHL, including CD19 CAR T treatment failures
- No DLTs in latest cohort of amended protocol
- Robust, efficient and scalable manufacturing process using closed system

ZILOVERTAMAB: POTENTIALLY FIRST-IN-CLASS MONOCLONAL ANTIBODY TARGETING ROR1

- Encouraging 100% PFS for patients with CLL and TP53 aberrations being further investigated
- Discussions ongoing with BTK inhibitor developers

MULTIPLE CATALYSTS WITHIN CASH RUNWAY PERIOD

- ONCT-534 Phase 1/2 dose escalation study in R/R mCRPC initial data in 3Q 2024
- ONCT-808 clinical data update in aggressive B-cell NHL in 4Q 2024
- Cash and short-term investments of \$21.4M as of June 30, 2024, cash runway into Q1 2025

Experienced Team





James Breitmeyer, MD, PhD CEO, Co-founder, Director





Richard Vincent CFO Genoa sorrento Zavante élan



Salim Yazji, MD СМО Baxter NOVARTIS Baxalta CALIMMUNE EXELIXIS Johnson +Johnson



Raj Krishnan, PhD CTO/CSO 🚺 GILEAD DYNAVAX AMGEN MERCK



Chase Leavitt General Counsel

Tang Capital - LINEAGE Management

> LATHAM LATHAM®WATKINS



Pablo Urbaneja SVP, Corporate Development





David Hale Co-founder Board Chairman





Michael Carter, MB Director

HEALTHCARE



Histol Myers Squibb

Jill DeSimone

Director

teva



Daniel Kisner, MD Director

Y Caliper





Columbia Care PENNSYLVANIA HEALTH SYSTEM

Rosemary Mazanet, MD, PhD

Director



Bill LaRue Director



Charles Theuer, MD, PhD

Director



TRACON Pfizer largeGen



Johnson & Johnson



Modality	Product Candidate	Indication	Preclinical	Phase 1	Phase 2	Phase 3
Dual-Action AR Inhibitor	ONCT-534	Prostate Cancer			Patients Treated	
ROR1 Cell Therapy	ONCT-808 (Autologous CAR T)	Aggressive B-cell NHL			Patients Treated	
ROR1 mAb	Zilovertamab	Hematological Malignancies and Solid Tumors (ISTs)				eking nership

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ONCT-534: DUAL-ACTION ANDROGEN RECEPTOR INHIBITOR (DAARI)

ONCT-808: ROR1 TARGETED CELL THERAPY

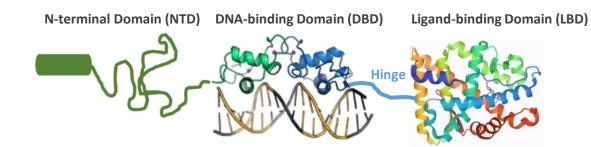
ZILOVERTAMAB: MONOCLONAL ANTIBODY TARGETING ROR1

FINANCIAL INFO AND UPCOMING MILESTONES



Differentiated Mechanism of Action

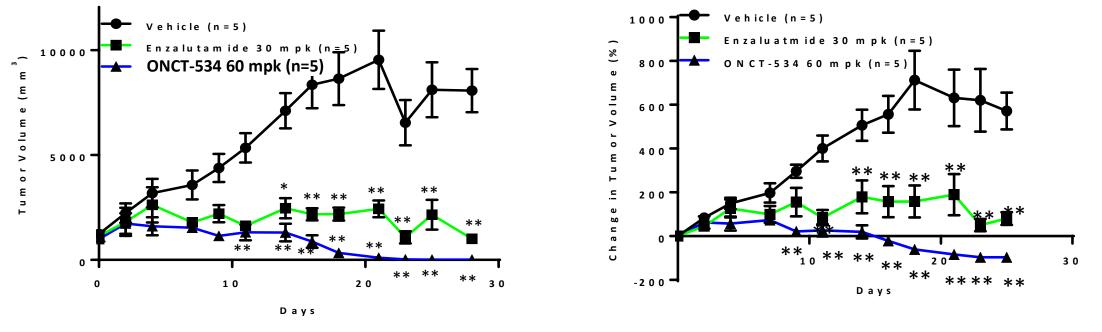
- ONCT-534 acts on both the N-terminal domain (NTD) and the ligand-binding domain (LBD) of the androgen receptor (AR) and induces AR protein degradation
 - NTD binding essential for activity against splice-variants
- Current standard of care treatments, such as enzalutamide or apalutamide, bind to LBD only



Potential to address unmet needs in prostate cancer

- Potential next-generation treatment option for patients with R/R metastatic prostate cancer
- Compelling preclinical efficacy in vitro and in vivo
 - Activity against enzalutamide-sensitive and resistant models, including AR overexpression, LBD mutants, splice variants tumors
- Dose escalation portion of Phase 1/2 Study ONCT-534-101 in patients with mCRPC ongoing; received Fast Track designation by U.S. FDA in October 2023
- Potential in other AR-driven disease, including luminal AR-triple negative breast cancer (LAR-TNBC) and non-oncology rare disease indication

ONCT-534 Exhibits Anti-tumor Activity in an ENZA-Sensitive, AR-overexpressing VCaP Model in Castrated Male Rats



**p<0.01

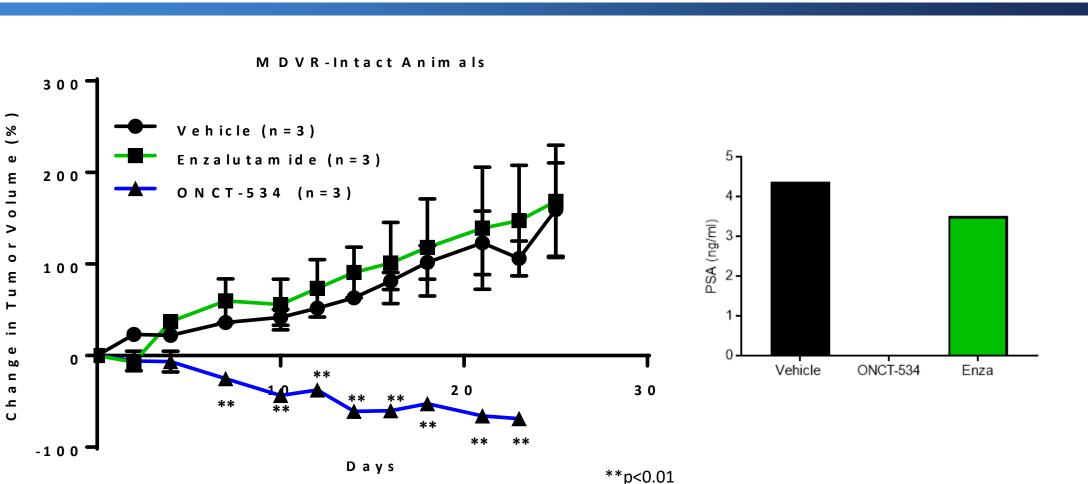
ONCT-534 is active against prostate cancer models expressing high levels of a native sequence AR

Ponnusamy, Clin Cancer Res 2019

TERNAL

nerapeutics

ONCT-534 Exhibits Anti-tumor Activity in ENZA-Resistant MDVR VCaP Model in Uncastrated Male Rats



ONCT-534 is active against enzalutamide-resistant MDVR prostate cancer model, even in the presence of normal androgen levels

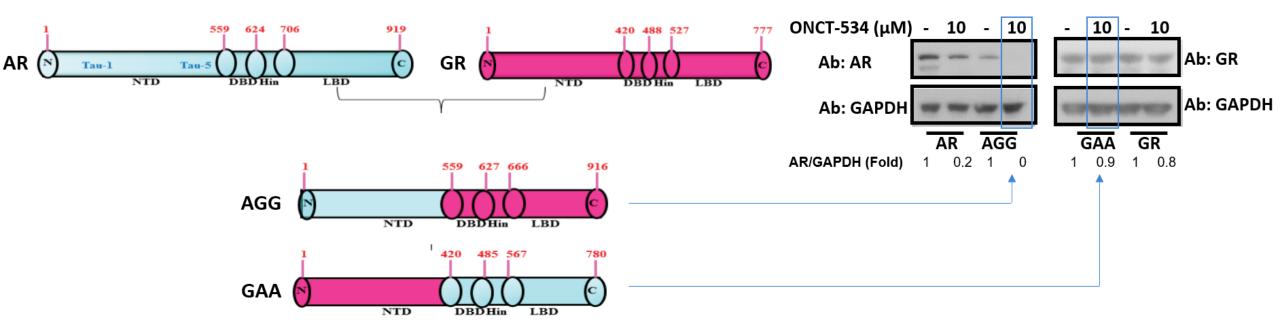
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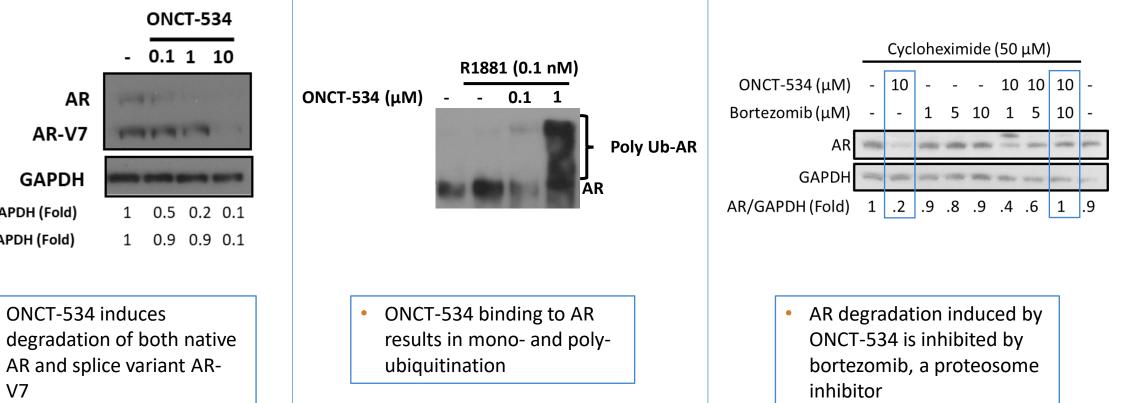
Conclusion:

• ONCT-534 requires the AR N-terminal domain to induce AR degradation



Chimeric constructs of AR and GR (glucocorticoid receptor) were generated. ONCT-534 induced degradation of AR and AGG (AR-NTD, GR-DBD and LBD), but not GR and GAA (GR-NTD, AR-DBD and LBD).

ONCT-534 Induces Degradation of Native and Splice Variant AR, Mediated by Ubiquitination and Proteosomal Degradation



ONCT-534 inhibits growth • and PSA level of AR-V7 expressing in vivo prostate cancer model

AR/GAPDH (Fold)

V7

AR-V7/GAPDH (Fold)

therapeutics

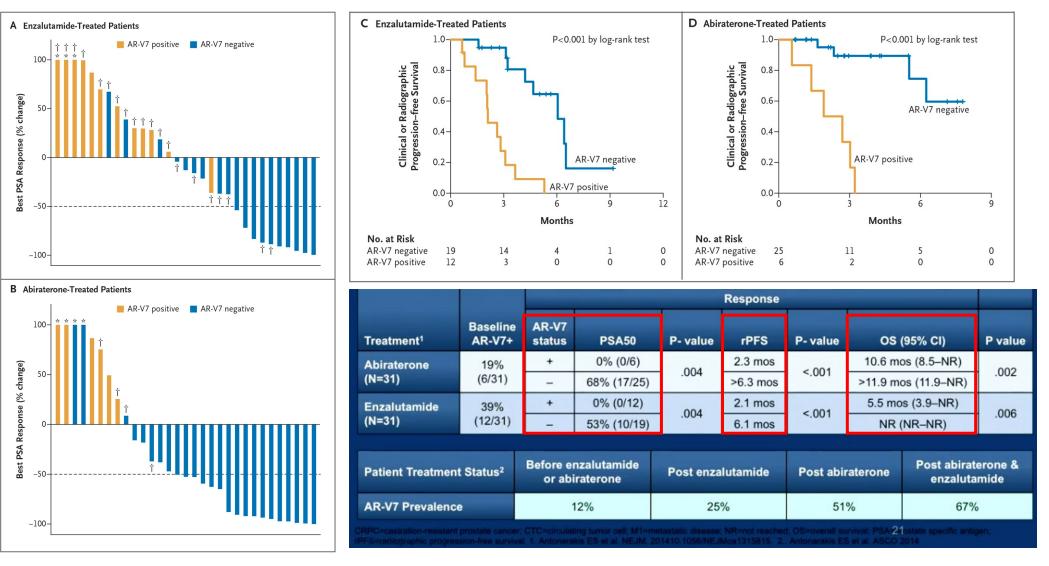
ONCT-534 Differentiated vs other AR-targeting Therapeutic Agents



	AR antagonist	PROTAC	ANITEN	DAARI
Examples	Enzalutamide (Pfizer) Apalutamide (J&J) Darolutamide (Bayer)	ARV-110 (Arvinas)	EPI-7386 (ESSA)	ONCT-534
First-in-class Molecule	X	V	V	V
AR Degradation	X	V	X	V
N-terminal domain Binding	X	x	V	V
Active against AR LBD Mutants	certain mutants ^{1,2}	certain mutants ³	Ş	V
Active in ENZA-resistant in vivo models	darolutamide	V	V	V
Active in AR-overexpressing in vivo models	V	V	V	V
Active in AR-SV expressing in vivo models	X	x	?	V
Active in CRPC models using intact rodents	apalutamide ⁴	V	?	V

v = Yes, X = No, ? = Unknown

AR-V7 Splice Variant with Loss of AR-LBD Associated with Poor Outcomes



Antonarakis NEJM 2014

Concepcion, Raoul S. "AR-V7 Predicts Response in CRPC" November 9, 2018.

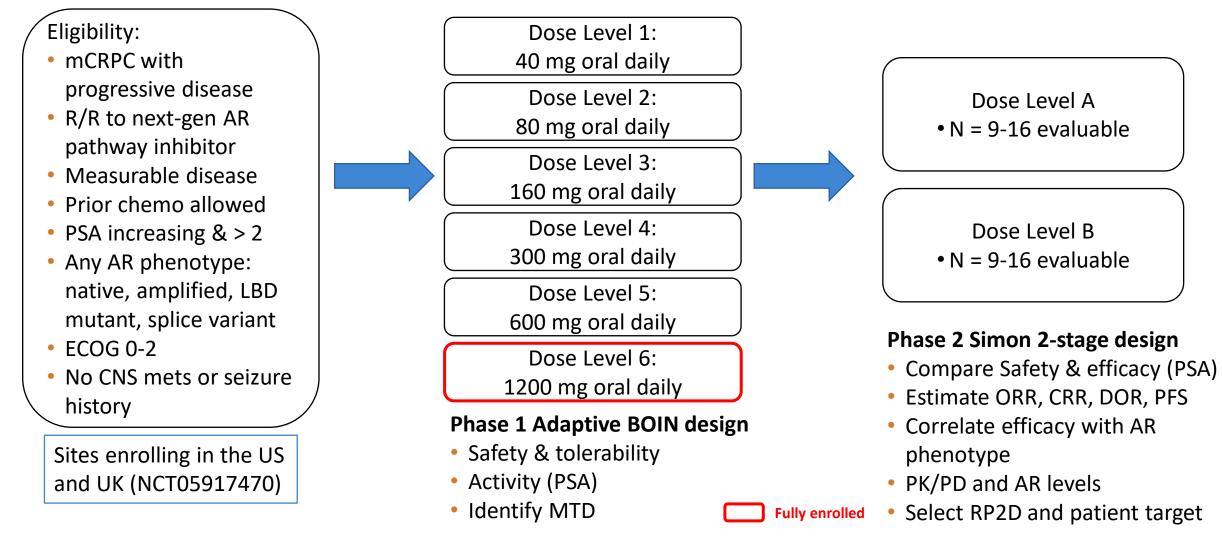
ONCTERNAL

therapeutics™

ONCT-534-101 – 1200 mg Dose Level Enrolled in mCRPC Phase 1/2 Study

No DLTs or concerning adverse events observed





mCRPC: metastatic castrate resistant prostate cancer; Androgen Receptor pathway inhibitor: enzalutamide, darolutamide, apalutamide, abiraterone; LBD: AR ligand binding domain; MTD: Maximum Tolerated Dose; RP2D: Recommended Phase 2 Dose; ORR: Objective Response Rate; CRR: Complete Response Rate; DOR: Duration of Response



Johann de Bono, M.D., Ph.D.	Evan Yu, M.D.	Matthew Smith, M.D., Ph.D.		
Regius Professor of Cancer Research at	Professor and Section Head of Medical	Director of the Genitourinary		
The Institute of Cancer Research, London	Oncology at the Fred Hutch Cancer Center	Oncology Program at Mass General		
 Director of the joint Drug Development	 Medical Director of Clinical Research	 Internationally recognized expert		
Unit at The ICR and The Royal Marsden	Support for the Fred Hutch Children's	in prostate cancer and authored		
NHS Foundation Trust, London	Cancer Consortium	>150 peer-reviewed articles		
 Lead trials of abiraterone, cabazitaxel, enzalutamide and multiple PARPi 	 Focused on personalized-medicine approach and the discovery of unique prostate cancer biomarkers 	 Lead investigator in darolutamide pivotal study 		
Scott Dehm, Ph.D.	Howard Soule, Ph.D. – pro-bono advisor	Gunnar Kaufmann, Ph.D.		
Professor in Cancer Research at the	Executive Vice President & Chief Science	SVP and CSO and Head of Open		
University Minnesota	Officer at the Prostate Cancer Foundation	Innovation at Kyowa Kirin, Inc.		
 Research focused on the role of AR and	 Senior fellow of the Milken Institute,	 Former CSO at Oncternal, and		
alterations in AR signaling in prostate	and member of the DoD Prostate	Adjunct Assistant Professor at		
cancer development and progression	Cancer Research Program	The Scripps Research Institute		
and re-activation the androgen/AR pathway	 Vice president and managing director of CaP CURE 	 Led ONCT-534 preclinical development 		



Prostate Cancer Treatn	nent Paradigm					
Localized	Systemic –	mCRPC				
Localized	Systemic	1 st line		2 nd line		3 rd line
	AR-dependent				AR Independ	dent
 Active surveillance Surgical / chemical castr (LHRH analogues) 	NUBEQA (darcERLEADA (apa	bitors utamide) – Pfizer/Aste olutamide) – Bayer lutamide) – J&J serone acetate) – J&J		motherapy	 PARP Inhibitors LYNPARZA – AZ TALZENNA – Pfiz 	N
Development Programs (not exhaustive)	NTD-Inhibitor • Masofaniten - ESSA	 AR degraders ARV-766 – Arvinas/Novartis BMS-986365 - BMS 	Other MoA ODM-208 (CYP11 inhibitor) – Merc PF-06821497 (EZ inhibitor) – Pfizer	k PNT200 H2 Point/L	02 – ADC) – Am illy • JANX007 (I L – CD3 TCE) –	 SMA Gedatolisib hbrx/J&J PSMA- Janux PSMA- Celcuity PSMA- Afuresertib (AKT
	ONCT-534 future positioning		ONCT-534 position			

ONCT Corporate Presentation August 2024





ONCT-534: DUAL-ACTION ANDROGEN RECEPTOR INHIBITOR (DAARI)

ONCT-808: ROR1 TARGETED CELL THERAPY

ZILOVERTAMAB: MONOCLONAL ANTIBODY TARGETING ROR1

FINANCIAL INFO AND UPCOMING MILESTONES

- Expressed on most B-cell malignancies, including
 - diffuse large B-cell lymphoma (DLBCL), chronic lymphocytic leukemia (CLL), mantle cell lymphoma (MCL)
- Expressed on many solid tumors
 - Increased ROR1 expression associated with more aggressive tumors, shorter PFS and OS
- ROR1 activity associated with **aggressive phenotype**
 - Invasion, metastasis, stem cell-like behavior, and resistance to treatment
- Oncternal ROR1 pipeline differentiated and advancing
 - Deep target biology expertise & immunotherapy experience

ROR1 Expressed on Multiple Solid and Liquid Tumors

95%
95%
96%
90%
90%
89%
83%
83%
77%
75%
73%
57%
54%





Michael Wang, MD

Endowed Professor in the Department of Lymphoma & Myeloma at MD Anderson Cancer Center

- Director of the Mantle Cell Lymphoma Program of Excellence and Co-Director of the B-Cell Lymphoma Moon Shot Program at MD Anderson Cancer Center
- Lead PI in Tecartus[®] registrational study
- Over 200 peer-reviewed publications

Marcela Maus, MD, PhD

Associate Professor, Medicine, Harvard Medical School Director of Cellular Immunotherapy, Cancer Center, Massachusetts General Hospital

- Translational physician-scientist in cancer immunology
- Lab focuses on the design, generation, and use of innovative forms of immune cell engineering
- Trained in the laboratories of Drs. Katherine High, Michel Sadelain, and Carl June

Angela Shen, MD, MBA

Clinical and Translational Market Sector Leader Mass General Brigham; CMO Walking Fish

- Deep clinical, regulatory, and strategic expertise in autologous and allogeneic cell therapies
- Experienced CMO in the cell therapy biotech space
- Led clinical team responsible for designing and launching Kymriah[®] registrational study

Sadik Kassim, PhD

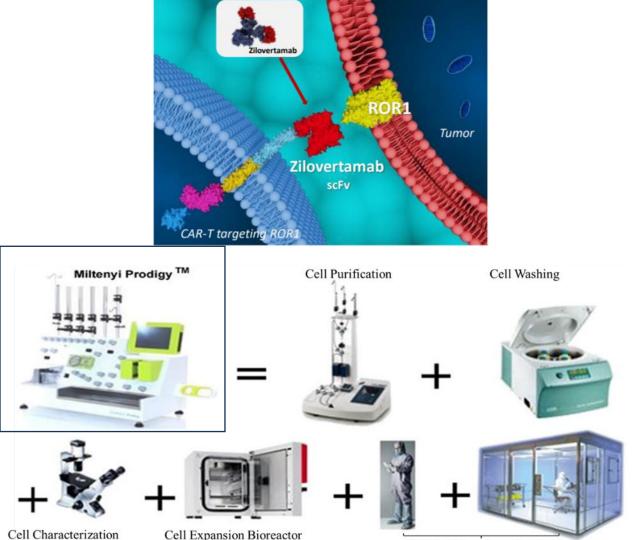
CTO (Genomic Medicines) Danaher Corporation

- Chief Technology Officer at Vor Biopharma
- Chief Scientific Officer at Mustang Bio
- Led the BLA and MAA CMC efforts for Kite's Tecartus[®]
- Former Head of Early Analytical Development for Novartis' Cell and Gene Therapies Unit
- Scientific news editor of Human Gene Therapy journal

ONCT-808 – CMC and Manufacturing



- 1. ROR1 targeting CAR construct optimized with demonstrated high potency against ROR1+ cancer cells
- 2. Lentivirus production process completed
- 3. Oncternal ROR1 CAR T cell product process optimized and confirmed
 - Flexible, closed, fully-automated Prodigy system eliminates manual processing
 - 7-day production process
 - Up to 2 billion CAR+ T cells produced
 - Encouraging CAR T cell phenotypes likely to persist and expand



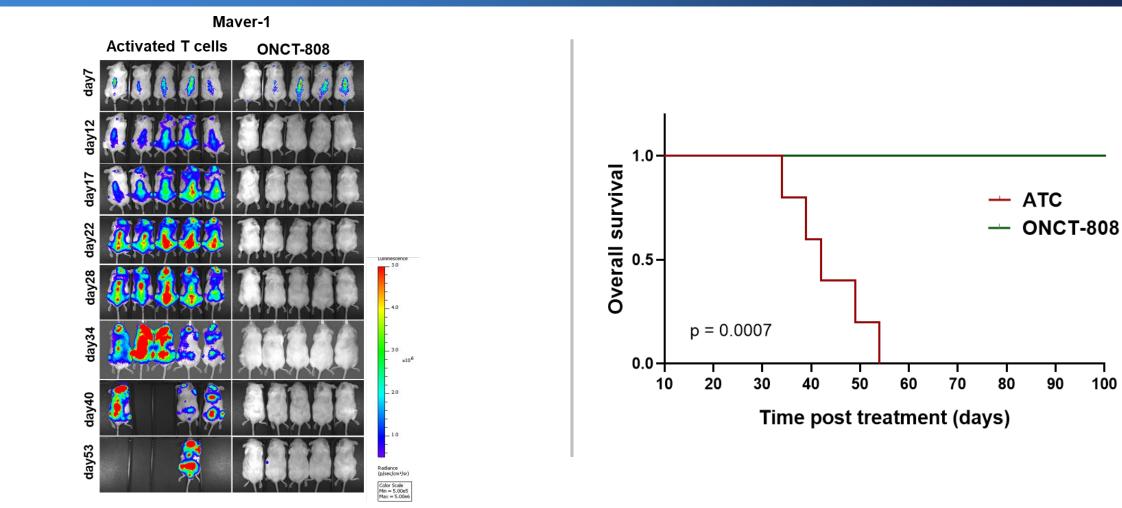
GMP Cell Manufacturing Facility

ONCT-808 Exhibits Anti-Tumor Activity in ROR1+ Model: Maver-1 MCL Xenograft



90

100



Maver FF-luc (2x10⁶ cells per mouse, 5 mice per treatment arm)

a. Activated T cells (6x10⁶ cells per mouse)

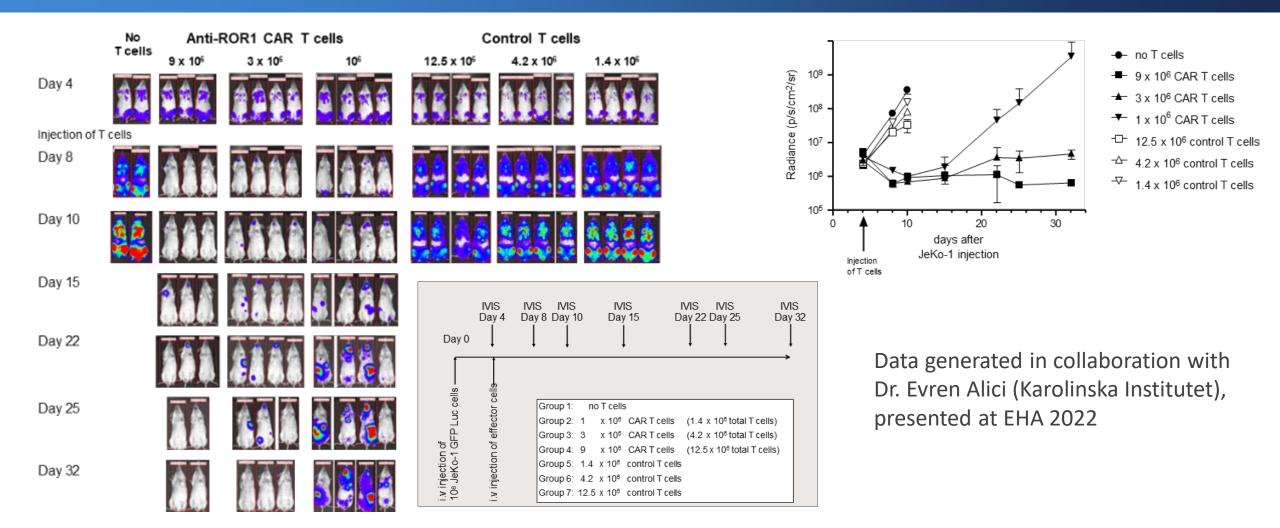
b. ONCT-808 CAR T cells (6x10⁶ CAR+ cells per mouse)

Collaboration with Dr. Michael Wang (MDACC)



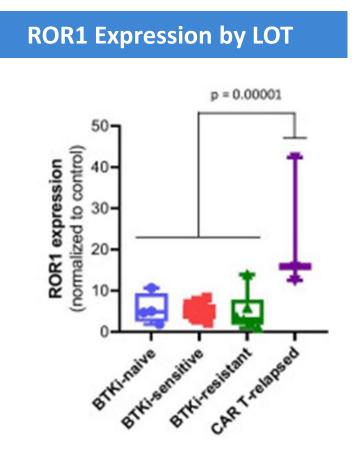
Making Cancer History®





Strong anti-tumor activity of ROR1 CAR T cells demonstrated in MCL xenograft mouse model

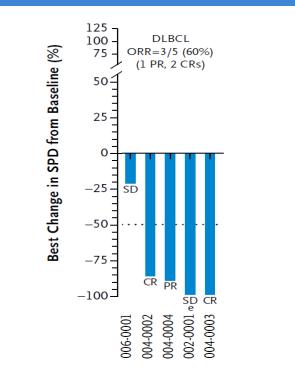




ROR1 expression was highest in brexucabtagene autoleucel (Tecartus[®])relapsed samples (*n* = 3) among analyzed cell samples from MCL patients

Jiang 2021 J Hematol Oncol

Phase 1 ROR1 ADC Efficacy Data



Patients with DLBCL responses had 3, 7, and 7 prior regimens (including HDT/HSCT in 1 patient and CAR T cells in 3 patients) Wang 2022 NEJM Evid

Phase 1 ROR1 ADC Safety Data

"...as expected with a monomethyl auristatin Econtaining antibody–drug conjugate, adverse events (AEs) included acute neutropenia and cumulative neuropathy..."

<u>"...no clinically-concerning AEs</u> <u>occurred to suggest ROR1-</u> <u>mediated toxicities or</u> <u>nonspecific zilovertamab</u> <u>vedotin binding to normal</u> <u>tissues..."</u>

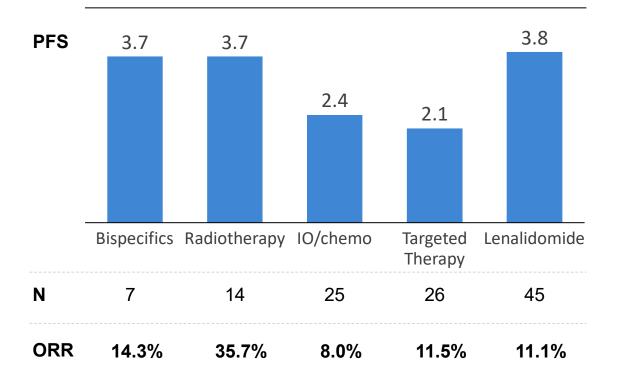
Wang 2022 NEJM Evid



Possible Advantages of Zilo-based ROR1 CAR T **Known CAR T Cell Therapy Challenges Potential for fewer antigen-negative relapses** Increasing number of relapses following ROR1 expression associated with aggressive CD19 CAR T cell therapy due to reduced and/or refractory tumor phenotype^{1,2} expression, mutations or loss of the target Efficacy ROR1 antigen loss can render cancer cells less antigen tumor evading CAR T cell efficacy aggressive and susceptible to chemo³ Multiple liquid and solid tumor targets Safety issues possibly related to activation of **Potential for less toxicity** CAR T by normal cells expressing the target • The antibody-drug conjugate zilovertamab vedotin (MK-2140) did not lead to off tumor, antigen Safety • CD19 and BCMA are expressed on subsets of on target toxicities in clinical studies^{4,5} ROR1 is not expressed on mature B cells and healthy B cells leading to B-cell aplasia and increased risk of infections with CAR T thus, targeting ROR1 not likely to lead to B-cell aplasia therapy



Median progression-free survival (PFS, months) after CD19 CAR-T relapse in DLBCL, by treatment¹



Di Blasi 2022 Blood, Post-CAR relapse in DLBCL

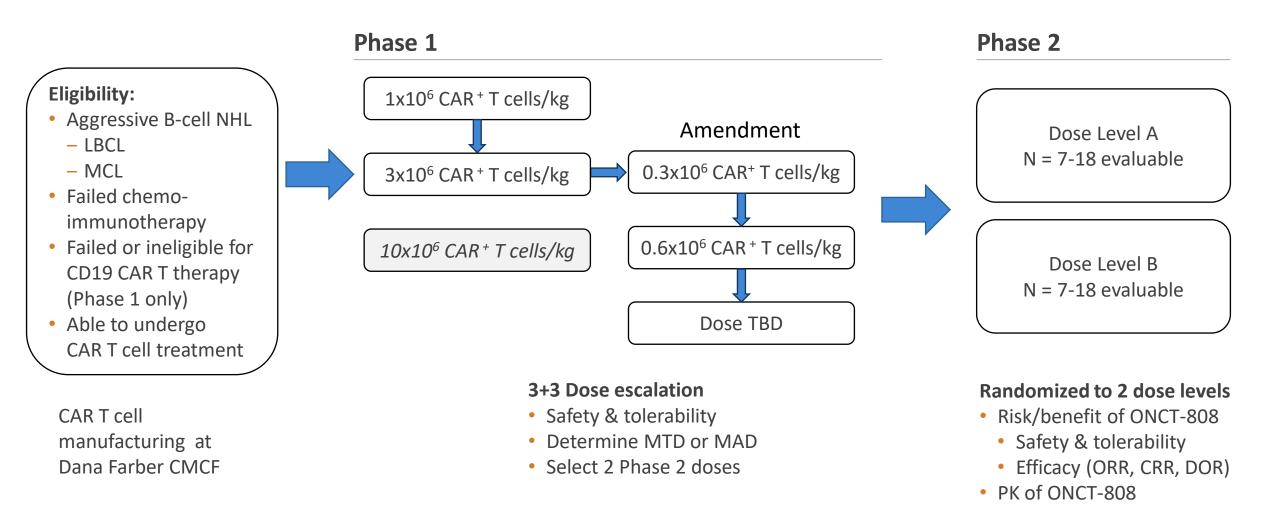
- Current outcomes post-CAR treatment are poor across all therapies, with 14% ORR, 7% CR, mPFS of 3 months and mOS of 5 months
- The prevalence of aggressive NHL in the US is ~30,000 cases, with ~5,000 patients eligible for 3rd line auto CAR T treatment², many of which eventually relapse
- As CAR T moves up to 2nd line the number of CD19 CAR T eligible patients and those who relapse will be significantly larger

1 Di Blasi 2022 Blood, Post-CAR relapse in DLBCL

2 Wenzhen 2021 JNCCN, Epidemiology of Diffuse Large B Cell Lymphoma (DLBCL) and Follicular Lymphoma (FL) Patients by Line of Therapy in the United States (US) and Europe (EU) ONCT Corporate Presentation August 2024

ONCT-808-101 - ROR1 CAR T Phase 1/2 Study *No DLTs observed to date with amended dosing regimen*





LBCL: Large B-Cell Lymphoma (Diffuse LBCL NOS, Primary mediastinal LBCL, High-grade BCL, DLBCL arising from indolent lymphoma or CLL, Follicular lymphoma grade 3B, Richter's syndrome); MCL: Mantle Cell Lymphoma; CMCF: Cell Manipulation Core Facility; MTD: Maximum Tolerated Dose; MAD: Maximum Administered Dose; RP2D: Recommended Phase 2 Dose; ORR: Objective Response Rate; CRR: Complete Response Rate; DOR: Duration of Response

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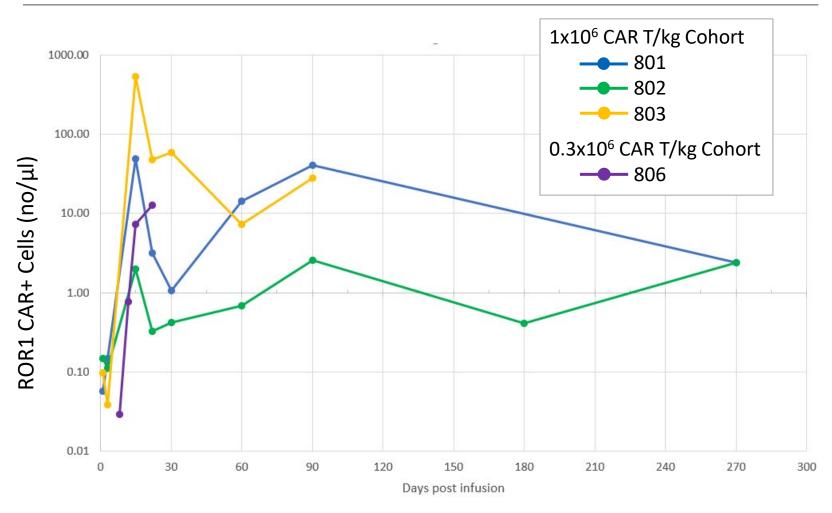


- Encouraging response signal in dosing cohort of 1x10⁶ CAR T cells per kg
 - 2/3 patients achieved complete metabolic response (CMR) by FDG PET-CT
 - 1/3 patients achieved partial response (PR) by FDG PET-CT
 - Common adverse events included decreased blood counts, pneumonia and Grade 1-2 CRS
- Grade 5 (fatal) SAE in 1st patient in dose level of 3x10⁶ CAR T cells per kg
 - Patient was an 80-year-old with bulky disease who had received four previous lines of therapy including CD19 CAR T and CD79b ADC
 - SAE consistent with CRS and immune effector cell-associated neurotoxicity syndrome (ICANS)
 - Initial autopsy report showed no histological evidence of his lymphoma

In alignment with FDA, Oncternal has implemented a protocol amendment that includes modified eligibility criteria, increased monitoring for infection, and testing lower doses



Study ONCT-808-101: CAR T Expansion and Persistence by Patient



- ONCT-808 CAR T cells expand and are persistent in all three patients from the 1 x 10⁶ CAR T cells/kg dose cohort and the first patient from the 0.3 x 10⁶ CAR T cells/kg dose cohort
- Expansion significantly associated with response in Axi-Cel study (Neelapu NEJM 2017)





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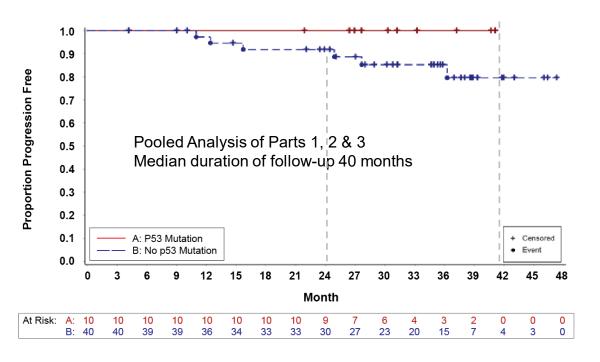
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FINANCIAL INFO AND UPCOMING MILESTONES



CIRM-0001 Phase 1/2 Study of Zilovertamab + ibrutinib in patients with CLL and aberrant TP53 (ASH 2022 Oral Presentation*)



PFS for p53 mut/del(17p) at **~42 months was 100%** for zilovertamab + ibrutinib (N=5 R/R, N=5 TN)

- Zilovertamab inhibits CLL-cell expression of genes induced by activated ERK1/2, NF-κB, STAT3, and NRF2 in CLL patients with TP53 mutation who have been treated with BTKi
- Zilovertamab + ibrutinib was well tolerated, with a safety profile similar to ibrutinib alone
- Prolonged PFS with zilovertamab + ibrutinib in TP53-altered CLL to be further investigated preclinically, potential in other tumor types
- Investigator-sponsored study of zilovertamab in combination with docetaxel in patients with metastatic CRPC to continue
- Partnerships and collaborations required to support future clinical trials

*Lee 2022, Blood





ONCT-808: ROR1 TARGETED CELL THERAPY

ONCT-534: DUAL-ACTION ANDROGEN RECEPTOR INHIBITOR (DAARI)

ZILOVERTAMAB: MONOCLONAL ANTIBODY TARGETING ROR1

FINANCIAL INFO AND UPCOMING MILESTONES



ONCT-534 DAARI

- Prostate cancer Phase 1/2 study
 - Initial clinical data
 - Additional clinical data readouts

ONCT-808 ROR1 CAR T cell therapy

- Aggressive B-cell NHL Phase 1/2 study
 - Clinical data update

Patients treated 3Q 2024 4Q 2024

Initial data reported 4Q 2024



Cash & Cash Investments @ June 30, 2024 Cash Runway into Q1 2025	\$21.4M
Debt	\$0M
Capitalization:	
Common Shares Outstanding	3.0M
Awards / Warrants in the Money @ June 30, 2024 ⁽¹⁾	0.5M
Fully Diluted in the Money	3.5M
Non-Dilutive Support	
 NIH Grants MOA, indication expansion 	\$4.0M

(1) Excludes out-of-the-money awards and warrants totaling ~0.4M

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