MacroGenics®

Developing
Breakthrough Biologics,
Life-changing Medicines®

Corporate Update

March 7, 2024

Legal Notices

The information in this slide deck is current as of March 7, 2024, unless otherwise noted, and is qualified in its entirety by reference to MacroGenics' Annual, Quarterly and Current Reports filed with the SEC. MacroGenics undertakes no obligation to update any of the information herein.

Cautionary Note on Forward-Looking Statements

Any statements in this slide deck about future expectations, plans and prospects for MacroGenics ("Company"), including statements about the Company's strategy, future operations, clinical development of the Company's therapeutic candidates, including initiation and enrollment in clinical trials, expected timing of results from clinical trials, discussions with regulatory agencies, commercial prospects of or product revenues from MARGENZA and the Company's product candidates, if approved, manufacturing services revenue, milestone or opt-in payments from the Company's collaborators, the Company's anticipated milestones and future expectations and plans and prospects for the Company, as well as future global net sales of TZIELD and the Company's ability to achieve the milestone payments set forth under the terms of the agreement with DRI (or its successors or assigns with respect to such agreement), and other statements containing the words "subject to", "believe", "anticipate", "plan", "expect", "intend", "estimate", "potential," "project", "may", "will", "should", "would", "could", "can", the negatives thereof, variations thereon and similar expressions, or by discussions of strategy constitute forward-looking statements within the meaning of Section 27A of the Securities Act of 1933 and Section 21E of the Securities Exchange Act of 1934. Actual results may differ materially from those indicated by such forward-looking statements as a result of various important factors, including: risks that TZIELD, vobramitamab duocarmazine, lorigerlimab, ZYNYZ, MARGENZA or any other product candidate's revenue, expenses and costs may not be as expected, risks relating to TZIELD, vobramitamab duocarmazine, lorigerlimab, ZYNYZ, MARGENZA or any other product candidate's market acceptance, competition, reimbursement and regulatory actions; our ability to provide manufacturing services to our customers; the uncertainties inherent in the initiation and enrollment of future clinical trials; the availability of financing to fund the internal development of our product candidates; expectations of expanding ongoing clinical trials; availability and timing of data from ongoing clinical trials; expectations for the timing and steps required in the regulatory review process; expectations for regulatory approvals; expectations of future milestone payments; the impact of competitive products; our ability to enter into agreements with strategic partners and other matters that could affect the availability or commercial potential of the Company's product candidates; business, economic or political disruptions due to catastrophes or other events, including natural disasters, terrorist attacks, civil unrest and actual or threatened armed conflict, or public health crises such as the novel coronavirus (referred to as COVID-19 pandemic); and other risks described in the Company's filings with the Securities and Exchange Commission. In addition, the forward-looking statements included in this slide deck represent the Company's views only as of the date hereof. The Company anticipates that subsequent events and developments will cause the Company's views to change. However, while the Company may elect to update these forward-looking statements at some point in the future, the Company specifically disclaims any obligation to do so, except as may be required by law. These forward-looking statements should not be relied upon as representing the Company's views as of any date subsequent to the date hereof.

Trademarks

DART, TRIDENT, MacroGenics, the MacroGenics logo and MARGENZA are trademarks or registered trademarks of MacroGenics, Inc. All third-party trademarks used herein are registered trademarks of their respective owners.

Investigational Agents

The safety and efficacy of investigational agents and/or investigational uses of approved products have not been established.

Unique Capabilities to Develop Next Generation Antibodies for Treating Cancer

Multiple Phase 2 Programs in Prostate Cancer

Promising initial data[(a)] with potential for multiple 2024 data catalysts

Studies:

TARACK

LORIKEET

HEAT[(c)]

Broad Capabilities for Drug Conjugates

Experience in combining novel targets with differentiated drug-linker technology

Proprietary Platforms for Multispecifics

Flexible platforms with clinical and/or partner validation

Proven R&D Track Record

Three approved products generated from our pipeline[(b)] fuel potential revenue

Margenza®

Tzield®

ZYNYZ®

Well Funded to Deliver on Plan

$230M Cash as of 12/31/23, plus anticipated payments, should provide cash runway into 2026

(a) See data slides previously presented (and included in this deck) that relate to both vobramitamab duocarmazine and lorigerlimab.
(b) TZIELD® was sold to Provention Bio (Sanofi) and is marketed by Sanofi; ZYNYZ™ was licensed to, and is marketed by, Incyte.
(c) The "Help Elucidate & Attack Longitudinally" (HEAT) neo-adjuvant prostate cancer study is an investigator-sponsored trial.

Multiple Opportunities to Impact Treatment Paradigm in Prostate Cancer

Prostate cancer remains 2nd leading cause of cancer death in U.S. (34.7k deaths in 2023[(a)])

Vobra Duo
(ADC)

TARACK

- Phase 2 fully enrolled in mCRPC
- Initial clinical data expected at ASCO 2024

Lorigerlimab
(Bispecific Checkpoint)

LORIKEET

- Randomized Phase 2 in mCRPC
- Trial update expected in 2H24

Enoblituzumab
(Fc-optimized mAb)

HEAT

- Phase 2 IST in neoadjuvant PC
- Initiated 1Q24

Multiple potential first-in-class programs

Incorporate cutting-edge platform technologies

Complementary MoAs

Combine with SoC and other internal assets

(a) Source: American Cancer Society (https://www.cancer.org/cancer/types/prostate-cancer/about/key-statistics.html)

Deep and Differentiated Proprietary Pipeline with Retained Commercial Rights

Program (Target)	Potential Indication(s)	Modality/ Platform	Preclinical	Phase 1	Phase 2	Phase 3	Partner / Sponsor
Vobramitamab Duocarmazine (B7-H3)	mCRPC TAMARACK Study	ADC					
	NSCLC, SCLC, Melanoma, SCCHN, Anal Cancer	ADC		*Initiation planned mid-2024*			
	Multiple Solid Tumors *(+lorigerlimab)*	ADC + DART®					
Lorigerlimab (PD-1 × CTLA-4)	mCRPC *(+docetaxel)* ZORIKEET Study	DART					
Enoblituzumab (B7-H3)	Neo-adj. Prostate Cancer HEAT Study[a]	Fc-optimized mAb					Johns Hopkins Medicine
Tebotelimab[b] (PD-1 × LAG-3)	Solid Tumors & Heme Malignancies	DART					
MGC026 (B7-H3)	Multiple Solid Tumors	ADC					
MGC028 (ADAM9)	Multiple Solid Tumors	ADC					

The safety and efficacy of investigational agents and/or investigational uses of approved products have not been established. Pipeline reflects current status of each program or most recently completed phase of development.
(a) The "Help Elucidate & Attack Longitudinally" (HEAT) study is an investigator-sponsored trial.
(b) MacroGenics currently has no active/ongoing tebotelimab studies.

Partnered Programs: Potential Future Cash Flow & Platform Validation

Program (Target)	Potential Indication(s)	Modality/ Platform	Preclinical	Phase 1	Phase 2	Phase 3	Marketed	Partner
MARGENZA® (HER2)	HER2+ Metastatic Breast Cancer	Fc-optimized mAb						EVERSANA (a)
ZYNYZ® (PD-1)	Merkel Cell Carcinoma	mAb						Incyte
	Squamous Cell Anal Carcinoma	mAb						
	Non-Small Cell Lung Cancer	mAb						
TZIELD® (CD3)	Stage 2 "At Risk" T1D	mAb						sanofi
	Stage 3 "Early Onset" T1D	mAb						
PRV-3279 (CD32B × CD79B)	Systemic Lupus Erythematosus	DART						sanofi
MGD024 (CD123 × CD3)	CD123+ Heme Malignancies	DART						Exclusive Option GILEAD
Bispecific (Undisclosed)	Multiple Solid Tumors	DART/TRIDENT®						GILEAD

$335M Non-dilutive funding achieved since mid-2022, with >$1B in potential milestones remaining from Sanofi and Incyte

The safety and efficacy of investigational agents and/or investigational uses of approved products have not been established. Pipeline reflects current status of each program or most recently completed phase of development.

(a) MacroGenics entered risk-sharing collaboration with Eversana in November 2020, under which MacroGenics books U.S. sales and Eversana leads execution of U.S. commercialization of MARGENZA. For all other currently partnered programs for which a license option has been exercised, the partner would book any future worldwide sales, if approved, and MacroGenics would be entitled to receive milestones and royalties.

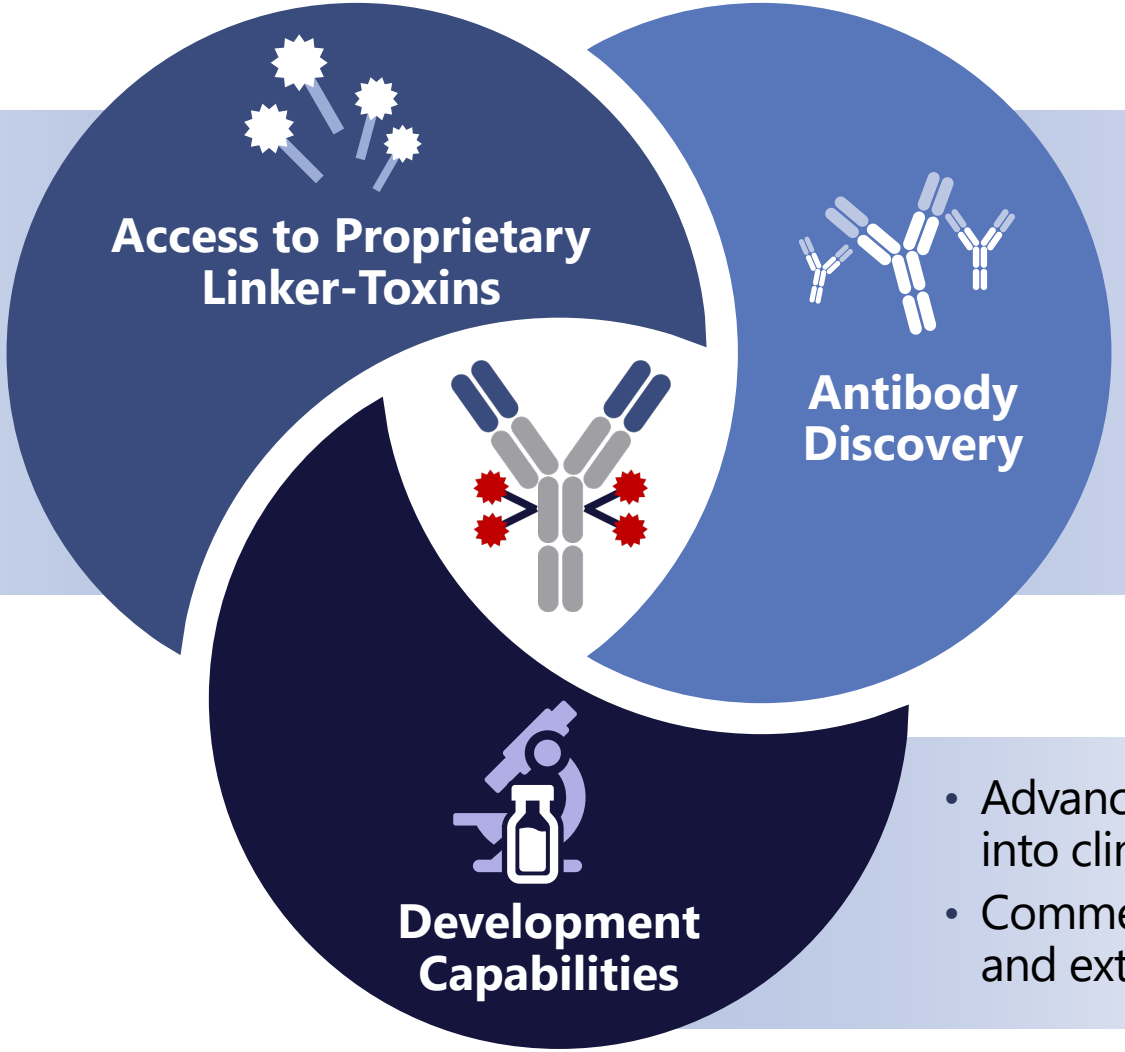
Uniquely Positioned to Develop Best-in-Class Antibody-Drug Conjugates

- Multiple technology partnerships
- Access to multiple validated classes of payloads and linker technologies

Synaffix connect to cure A Lonza Company

byondis

(Up to seven programs)

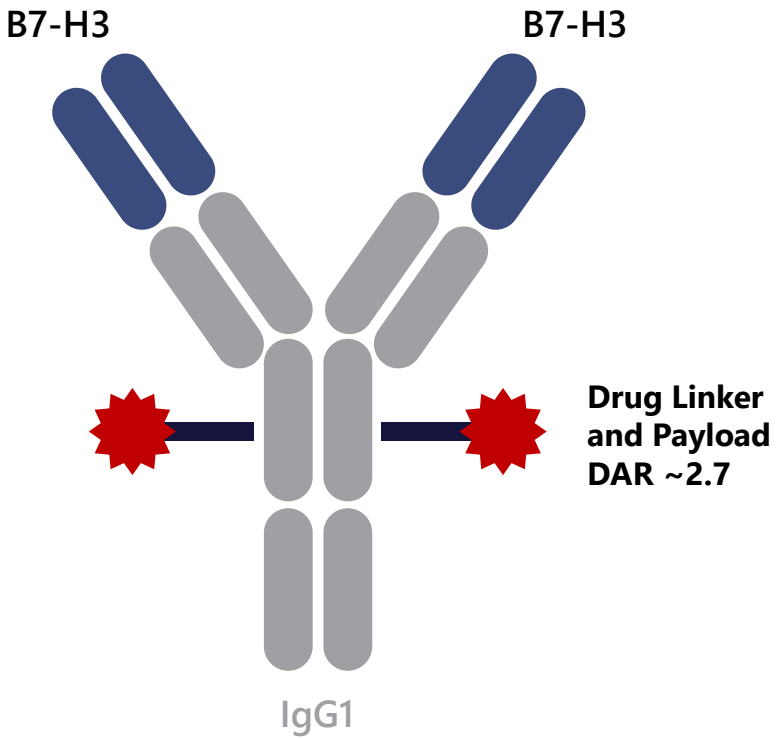


- First-in-class targets
- 20+ Years of antibody engineering expertise

- Advancing multiple ADC candidates into clinic
- Commercial-scale mAb manufacturing and external ADC supply chain

Vobra Duo: Antibody-Drug Conjugate with Duocarmycin-based Linker Payload

TAMARACK Phase 2 study fully enrolled ahead of schedule; Anticipate initial clinical data at ASCO 2024



Function/ MoA	• ADC that delivers potent duocarmycin payload to dividing and non-dividing B7-H3-expressing cells • Cleavable peptide linker facilitates bystander effect • Not subject to multi-drug resistance (MDR)
Clinical Results	• Preliminary results of mCRPC Phase 1 cohort expansion presented at ESMO 2021
Anticipated Milestones	• Anticipate initial clinical data presentation at ASCO 2024 – Updated clinical data, including rPFS (expected 2H24) • Plan to initiate additional dose expansion indications in NSCLC, SCLC, melanoma, SCCHN and anal cancer (mid-2024) • Progress enrollment of combination study with lorigerlimab

Duocarmycin payload and cleavable peptide linker technology was licensed from Byondis, B.V., The Netherlands. mCRPC = metastatic castration-resistant prostate cancer.
Vobramitamab duocarmazine (vobra duo, previously known as MGC018) is investigational and has not yet been approved for marketing by any regulatory authority.

Vobra Duo: Baseline Patient Characteristics for mCRPC Expansion Cohort

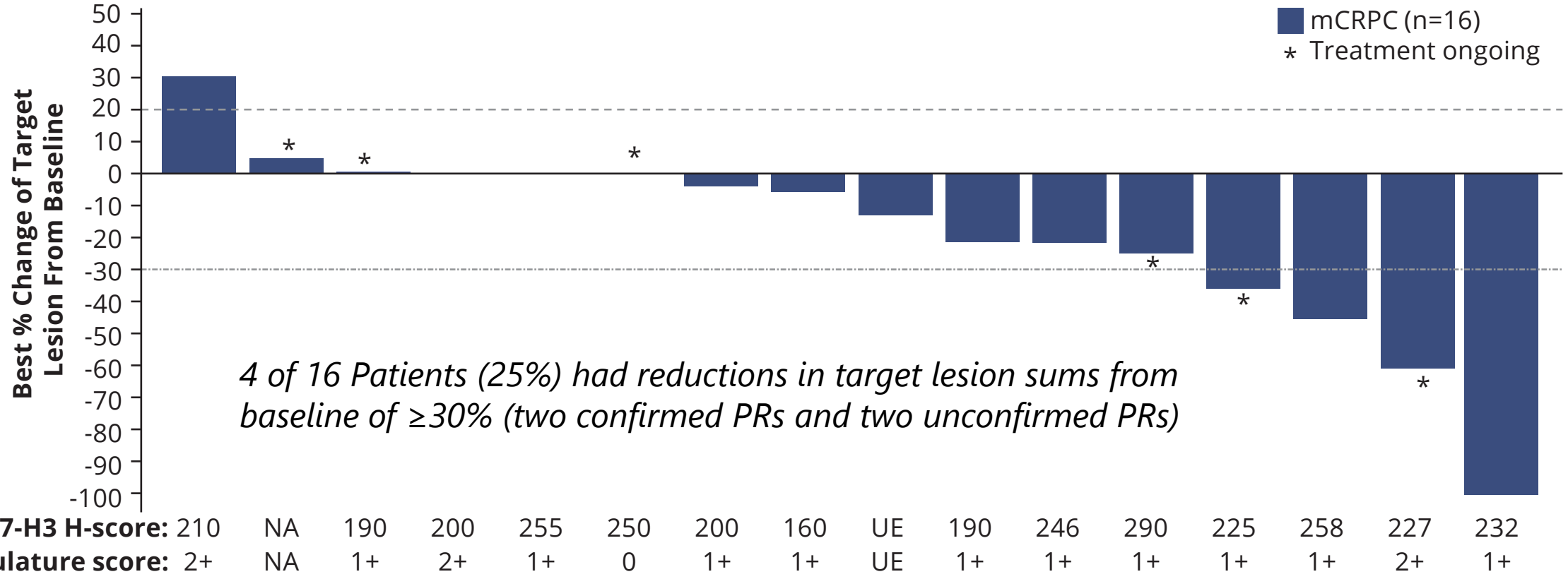
Characteristic	mCRPC (n=40)
Age, years	
Mean ± SD	69.7 ± 7.02
Median (range)	70.0 (52.0, 83.0)
Gender, n (%)	
Female	0
Male	40 (100)
Ethnicity, n (%)	
Not Hispanic or Latino	36 (90.0)
Hispanic or Latino	1 (2.5)
Not Reported	3 (7.5)
ECOG performance status, n (%)	
0	17 (42.5)
1	23 (57.5)
2	0
Number of prior therapies for advanced disease, median (range)	3 (2-7)
Prior chemotherapy, n (%)	40 (100)
Prior anti-PD-1/PD-L1, n (%)	7 (17.5)
Prior TKI, n (%)	7 (17.5)
Next generation hormonal therapy, n (%)	40 (100)
B7-H3 score (vasculature score), median (range)[a]	1 (0-3)
B7-H3 score (H-score), median (range)[a]	222.5 (24-300)[b]
Baseline PSA (ng/mL)	(n=39)
Mean ± SD	269.9 ± 693.83
Median (range)	89.8 (5.3, 4302.0)

(a) Recombinant anti-CD276 antibody, SP206 (Abcam, Toronto, Ontario, CA). (b) 30 of 41 with H-scores reported.
B7-H3=B7-homolog 3; ECOG=Eastern Cooperative Oncology Group; mCRPC=metastatic castration-resistant prostate cancer; NA=not applicable; PD-1=programmed death-protein 1; PD-L1=programmed death-ligand 1; PSA=prostate-specific antigen; SD=standard deviation; TKI=tyrosine kinase inhibitor.

ESMO 2021 (Shenderov, et al., #620P); 8/16/21 data cut-off

Vobra Duo: Best Percent Change of Target Lesions in mCRPC Expansion Cohort

Tumor response-evaluable population[(a)]



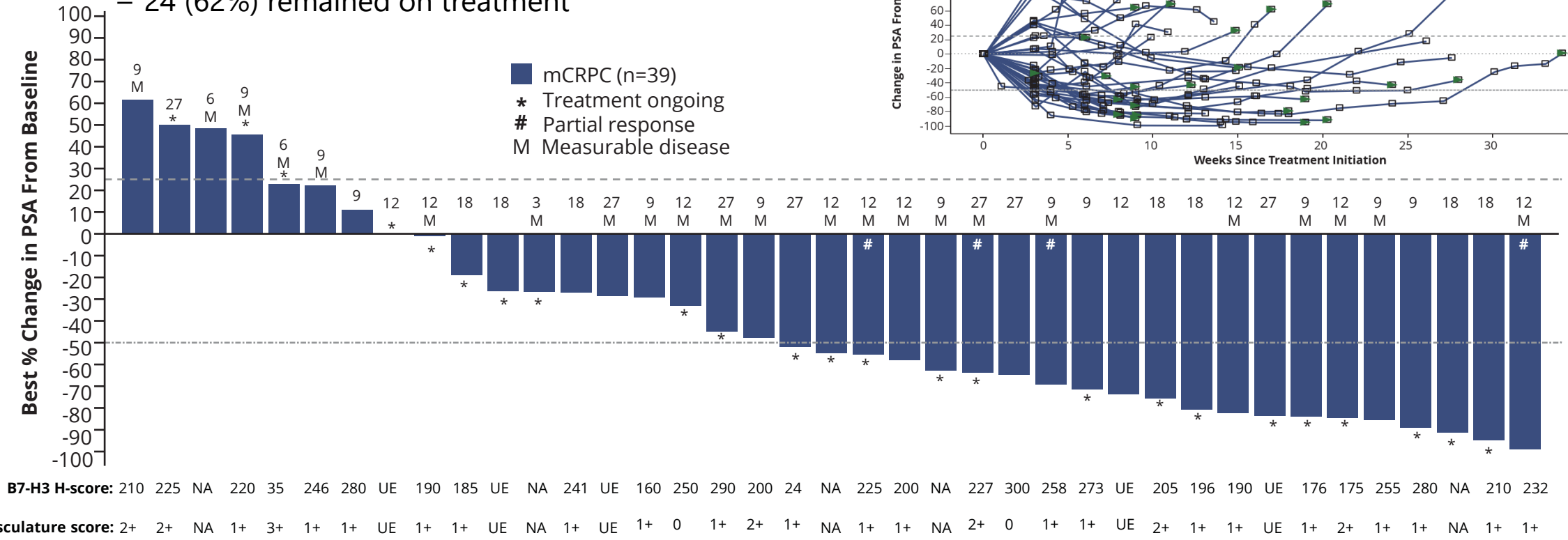
(a) Patients who received at least one dose and had at least one post-baseline evaluation.
mCRPC=metastatic castration-resistant prostate cancer; NA=not available; UE=unevaluable due to insufficient viable tumor.

ESMO 2021 (Shenderov, et al., #620P); 8/16/21 data cut-off

Vobra Duo: Best Percent Change of PSA in mCRPC Expansion Cohort

Tumor response-evaluable population[(a)]

- 39 Patients were evaluable for PSA response:
  - 21 (54%) had reductions in PSA from baseline of >50%
  - 24 (62%) remained on treatment



ESMO 2021 (Shenderov, et al., #620P); 8/16/21 data cut-off

Vobra Duo: Summary of Adverse Events

Overall Summary of Adverse Events[a]

	Treatment Emergent, n (%)	Treatment Related, n (%)
Any AE	83 (96.5)	78 (90.7)
Any Grade ≥3 AE	48 (55.8)	43 (50.0)
Any SAE	29 (33.7)	24 (27.9)
Any deaths	2 (2.3)	1 (1.2)[c]
AE of special interest (AESIs)	11 (12.8)	NA
AEs leading to MGC018 discontinuation	7 (8.1)	6 (7.0)
AEs leading to MGC018 dose reductions	18 (20.9)	18 (20.9)
AEs leading to MGC018 interruption	41 (47.7)	39 (45.3)

Treatment-Related Adverse Events[a] Reported in ≥10% of Patients[b]

	Any Grade, n (%)	Grade ≥3, n (%)
Fatigue	32 (37.2)	1 (1.2)
Neutropenia	29 (33.7)	19 (22.1)
Palmar-plantar eryth. syndrome	27 (31.4)	3 (3.5)
Pleural effusion	20 (23.3)	1 (1.2)
Nausea	19 (22.1)	1 (1.2)
Asthenia	17 (19.8)	4 (4.7)
Anemia	16 (18.6)	5 (5.8)
Decreased appetite	16 (18.6)	1 (1.2)
Edema peripheral	16 (18.6)	0
Headache	15 (17.4)	0
Diarrhea	13 (15.1)	1 (1.2)
Thrombocytopenia	12 (14.0)	6 (7.0)
Pyrexia	11 (12.8)	2 (2.3)
Pruritus	11 (12.8)	0
Rash	11 (12.8)	2 (2.3)
Skin hyperpigmentation	11 (12.8)	0

ESMO 2021 (Shenderov, et al., #620P); 8/16/21 data cut-off

Vobra Duo: mCRPC Phase 2 Study Design Summary

Fully enrolled ahead of schedule – 177 patients dosed; Initial clinical data anticipated ASCO 2024

TARACK

Key Eligibility Criteria:

- mCRPC
- One prior ARAT
- Up to one prior docetaxel-containing regimen[(a)]
- ≤ 3 Prior lines of therapy for mCRPC

Stratification Factors:

- Visceral disease (yes vs. no)
- Prior taxane (yes vs. no)
- Region (US/Canada vs. other)

R
1:1

N=91

Experimental Arm A
Vobramitamab duocarmazine
2.0 mg/kg Q4W

N=86

Experimental Arm B
Vobramitamab duocarmazine
2.7 mg/kg Q4W

Primary Endpoint:
rPFS

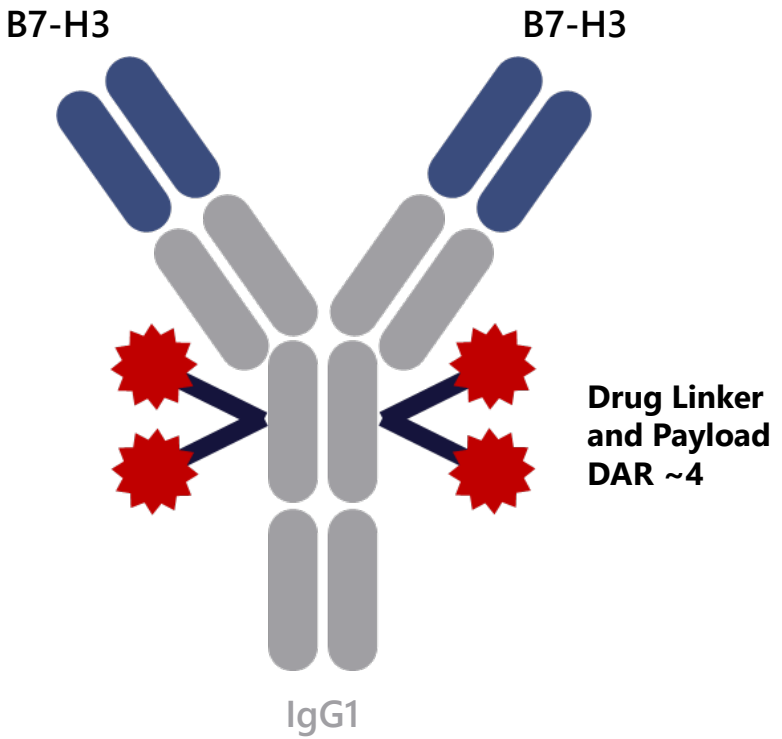
Key Secondary Endpoints:
AEs, PSA outcomes, ORR, DoR, SSEs, PK, ADA, nAb

(a) Participants who received an additional taxane or second ARAT (androgen receptor axis-targeted agent [abiraterone, enzalutamide or apalutamide]) for <60 days as bridging therapy while awaiting lutetium-177 vipivotide tetraxetan are also eligible. Other prior chemotherapy for prostate cancer is not allowed.

mCRPC=metastatic castration-resistant prostate cancer; ORR=objective response rate; PSA=prostate-specific antigen; Q4W=every 4 weeks; R=randomize; rPFS=radiographic progression-free survival.

MGC026: Complementary Program Employing Proprietary TOP1i Linker Payload

Second molecule in our B7-H3 ADC franchise



Function/ MoA	• B7-H3 overexpressed in multiple tumor types and correlates with poor prognosis • Employs Synaffix's proprietary ADC platform – GlycoConnect™ site-specific Fc conjugation with protease cleavable link for enhanced efficacy and safety – Hydraspace™ highly-polar spacer technology for increased stability and therapeutic index – SYNtecan E™ proprietary linker-payload for ADCs (DAR ~4) (exatecan is active catabolite)
Rationale / Positioning	• Complementary approach to vobra duo for targeting B7-H3 • Potential differentiation of exatecan vs. deruxtecan (DXd)[(a)] – 2-5x higher potency – Less susceptible to efflux/multi-drug resistance (MDR) – Exhibits superior cell permeability & bystander effect
Status	• Phase 1 dose escalation enrolling

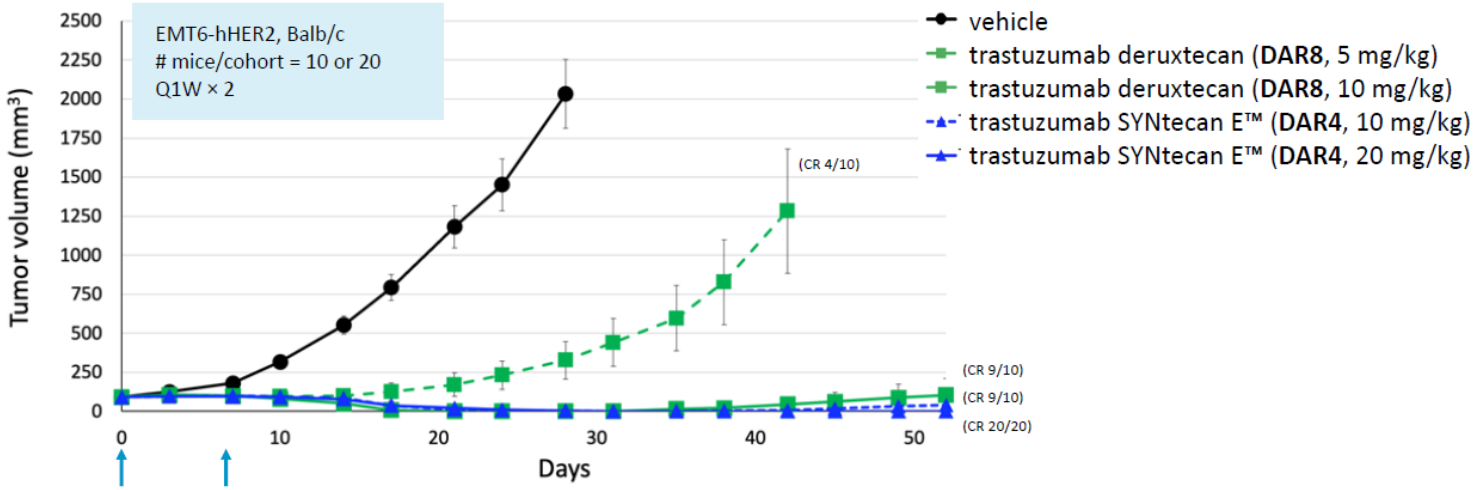
(a) Rowinsky, Eric K. "14 Preclinical and Clinical Development of Exatecan." Camptothecins in Cancer Therapy (2005); Khera, Eshita, et al. Molecular cancer therapeutics 21.2 (2022): 310-321.

MGC026 is investigational and has not yet been approved for marketing by any regulatory authority

Potential to Differentiate from Other TOP1i ADC Programs

	Exatecan	SN-38	Deruxtecan
Potency[(a)]	Sub-nM	3-10x Less Potent	2-5x Less Potent
Linker	HydraSpace™ & Val-Ala Protease-Cleavable	CL2A pH sensitive	GGFG Protease Cleavable
Conjugation	Site-Specific at Glycan (N297)	Native Cysteines	Native Cysteines
Less Sensitivity to Efflux/MDR Avoidance[(a)]	+++	++	+

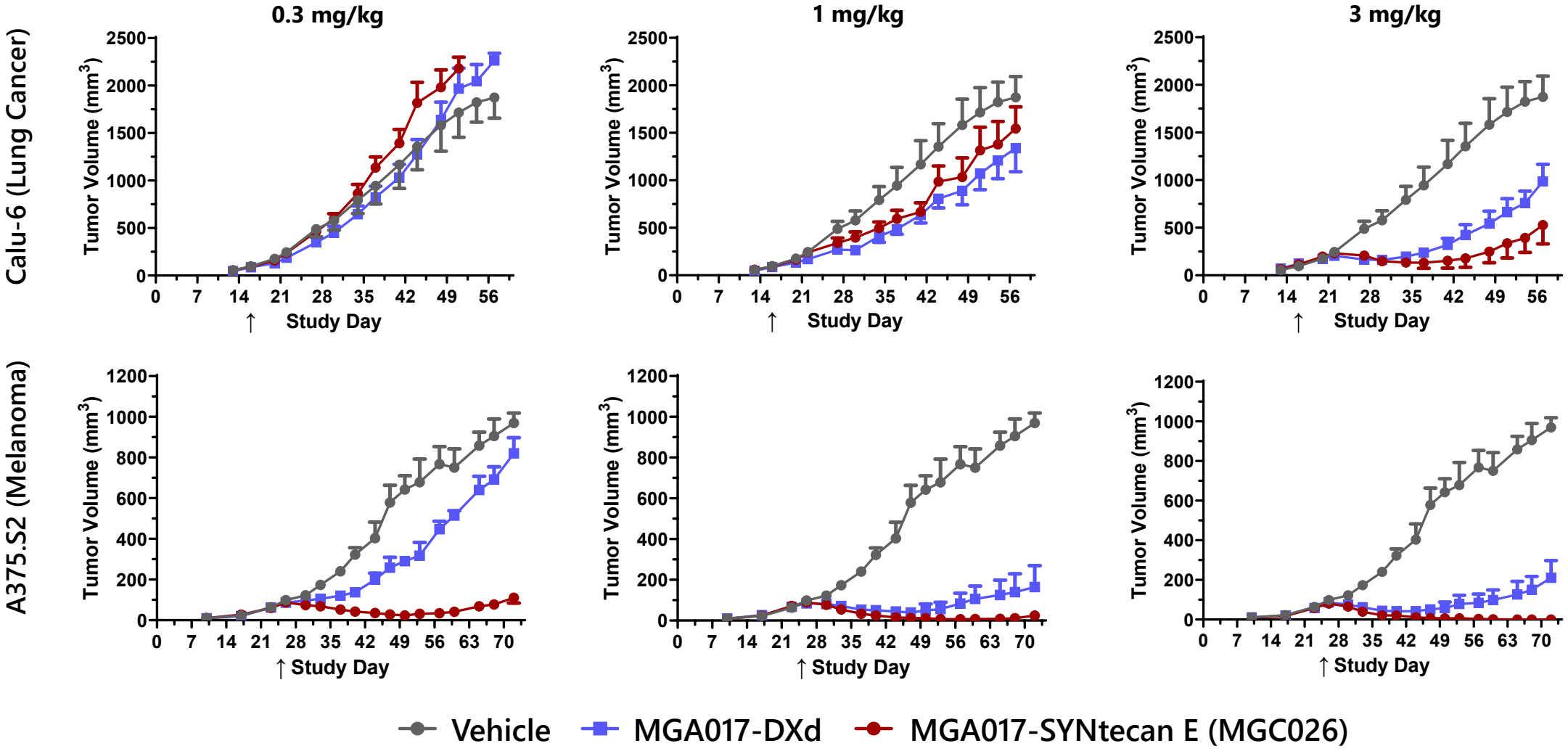
SYNtecan E ADC (DAR4) Outperforms Trastuzumab Deruxtecan (DAR8) in Syngeneic Mice[(b)]



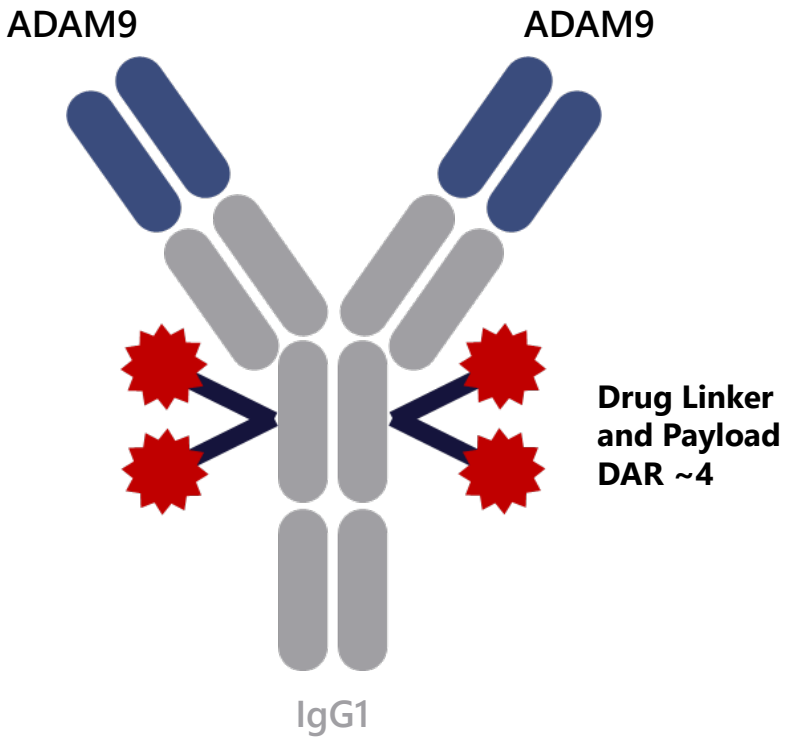
(a) *Rowinsky, Eric K. "14 Preclinical and Clinical Development of Exatecan." Camptothecins in Cancer Therapy (2005); Khera, Eshita, et al. Molecular cancer therapeutics 21.2 (2022): 310-321.*
(b) *Data generated by Synaffix; presented at World ADC 2023.*

MGC026: SYNtecan ADC Exhibits Favorable Profile Compared to DXd-based ADC

In vivo efficacy in preclinical CDx models



MGC028: Next-Generation, Preclinical ADAM9 ADC



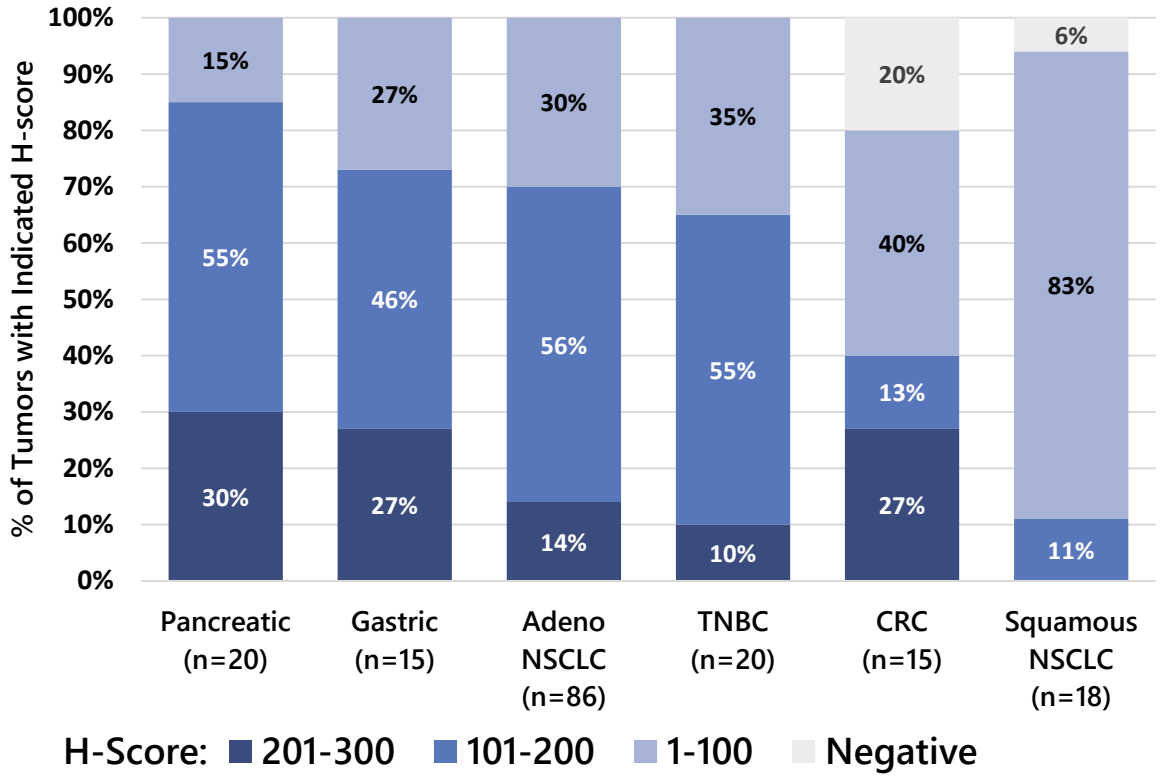
Function/ MoA	• ADAM9 plays role in tumorigenesis and cancer progression and is over-expressed in multiple cancers • Employs Synaffix's proprietary ADC platform – GlycoConnect™ site-specific Fc conjugation with protease cleavable link for enhanced efficacy and safety – Hydraspace™ highly-polar spacer technology for increased stability and therapeutic index – SYNtecan E™ proprietary linker-payload for ADCs (DAR ~4) (exatecan is active catabolite)
Rationale / Positioning	• In cynomolgus pilot tox, no observed ocular toxicities, which are typically seen with maytansinoid payloads – Observed in earlier cyno tox with maytansinoid-based ADC[(a)]
Status	• 4Q24 IND submission anticipated

(a) "Preclinical Evaluation of IMGC936, a Next-Generation Maytansinoid-based Antibody–drug Conjugate Targeting ADAM9-expressing Tumors," Mol Cancer Ther 2022; 21:1047–1059.

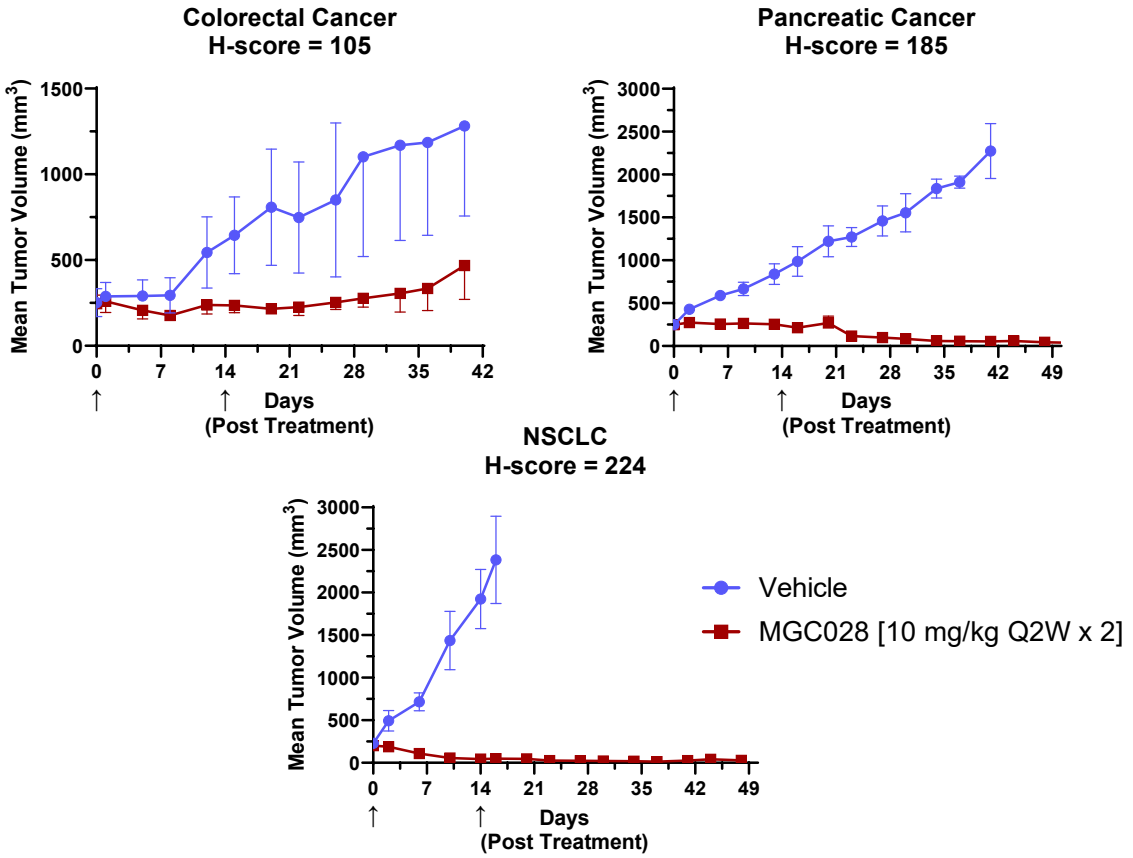
MGC028: Promising Product Profile Based on Preclinical Data

Supports broad clinical development opportunity across multiple solid tumors

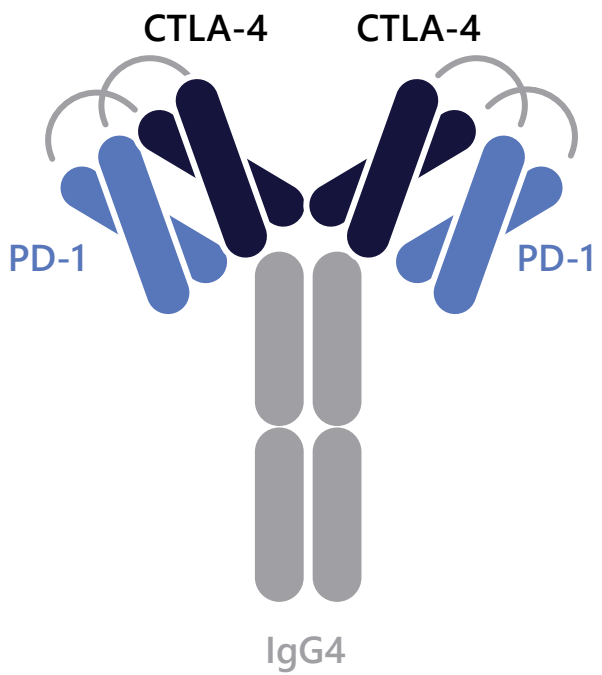
Broad Range of Indications Which May be More Susceptible to TOP1i-Based Payload



Potent Activity Observed Across PDX Models with Range of ADAM9 Expression



Lorigerlimab (PD-1 × CTLA-4): DART Molecule w/Two Validated Checkpoint Targets



Function/ MoA	• Simultaneous and/or independent blockade of two validated checkpoint inhibitor molecules
Clinical Results	• Ph. 1 dose expansion results presented at ASCO-GU 2023: – Manageable safety profile in advanced solid tumors (n=127 patients at dose of 6.0 mg/kg Q3W) – Preliminary evidence of durable anti-tumor activity in mCRPC population refractory to chemo and ARAT (confirmed ORR = 25.7%, confirmed PSA50 response rate = 28.6%)
Program Activities	• Enrolling combination study w/vobra duo in solid tumors • Enrolling randomized LORIKEET Phase 2 study in mCRPC

ARAT=androgen receptor axis-targeted agent (abiraterone, enzalutamide or apalutamide)

Lorigerlimab (formerly MGD019) is investigational and has not yet been approved for marketing by any regulatory authority

ASCO-GU 2023 (Luke, et al., #155); 12/12/22 data cut-off

Lorigerlimab: Durable Anti-tumor Activity Shown in Refractory mCRPC Population

42 Patients with mCRPC received lorigerlimab @ 6 mg/kg Q3W during dose expansion phase

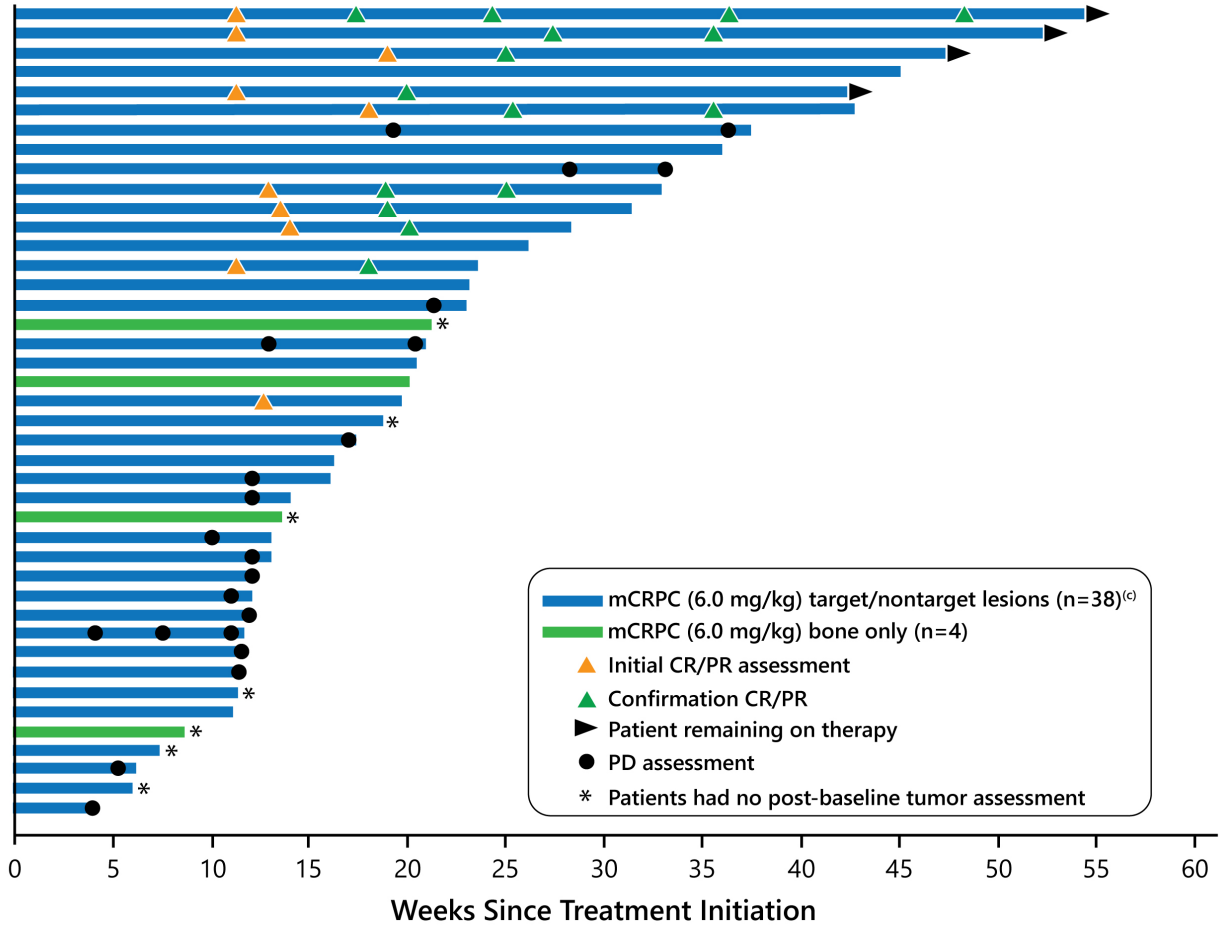
Baseline Characteristics (n=42)

Parameters		
Age	Median (range)	67 (55-79)
ECOG performance status n (%)	0	12 (28.6)
	1	30 (71.4)
Location of metastatic disease n (%)	Bone	40 (95.2)
	Liver	11 (26.2)
	Lung	8 (19.0)
Baseline SLD, mm n=35 with target lesions	Median (range)	48 (10-207)
Baseline PSA, ng/mL	Median (range)	94 (11-2523)
Prior lines of systemic therapy n (%)	Median (range) prior lines	2 (1-9)
	1	7 (16.7)
	2	15 (35.7)
	3	9 (21.4)
	4+	11 (26.2)
Prior systemic therapy n (%)	Docetaxel	35 (83.3)
	AR inhibitor	34 (81)
	PARP inhibitor	5 (11.9)
	Cabazitaxel	6 (14.3)

All specimens analyzed for microsatellite instability analysis (N=20) were microsatellite stable (MSS).

Majority of patients refractory to ARAT and taxane and with extensive tumor burden at study entry

Status of Patients



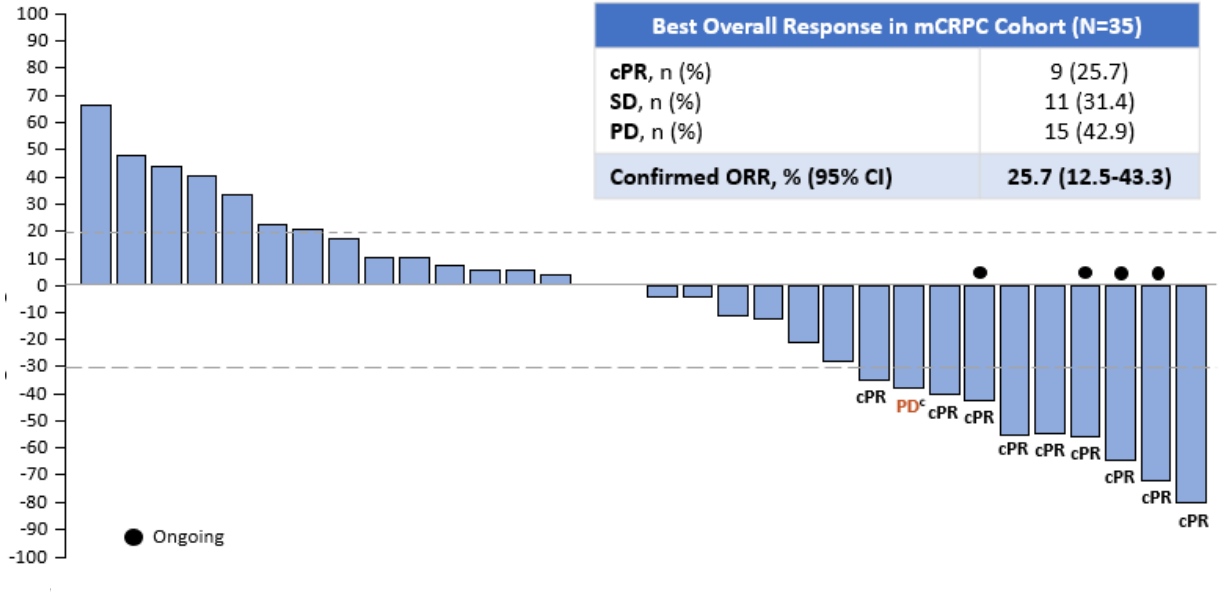
ASCO-GU 2023 (Luke, et al., #155); 12/12/22 data cut-off

Lorigerlimab: Efficacy Summary in mCRPC

Confirmed ORR = 25.7%, PSA50 response rate = 28.6%

Best % Change of Target Lesions

Best Overall Response in mCRPC Cohort (N=35)	
cPR, n (%)	9 (25.7)
SD, n (%)	11 (31.4)
PD, n (%)	15 (42.9)
Confirmed ORR, % (95% CI)	**25.7 (12.5-43.3)**

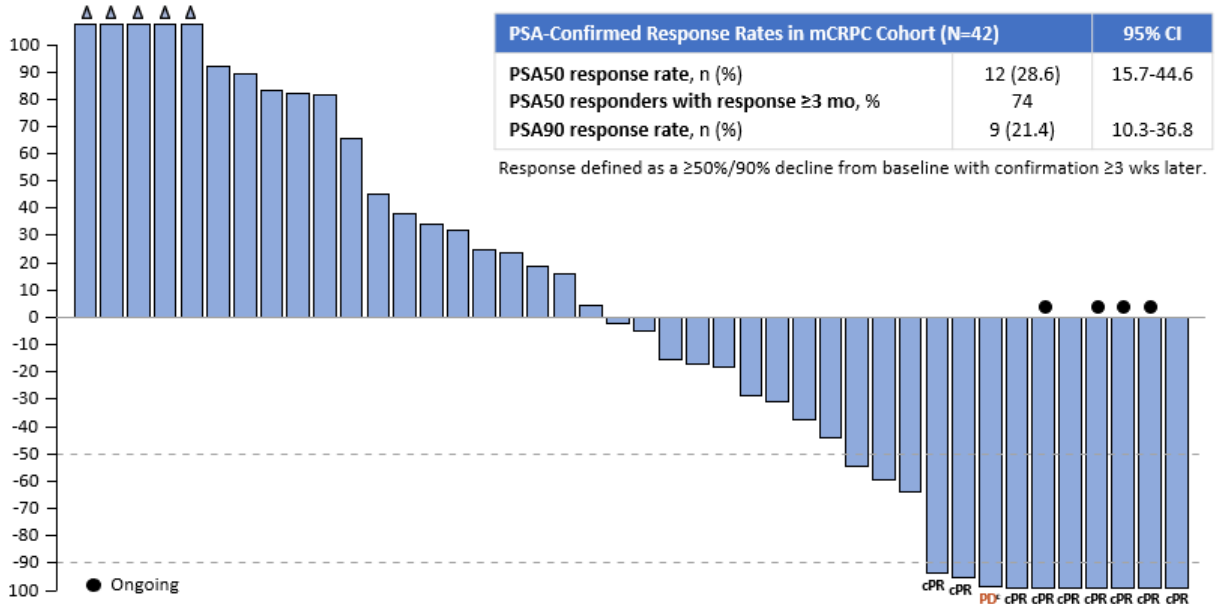


Includes 32 patients who received ≥1 dose, had measurable disease, and ≥1 post-baseline tumor evaluation

Best % Change of PSA

PSA-Confirmed Response Rates in mCRPC Cohort (N=42)		95% CI
PSA50 response rate, n (%)	12 (28.6)	15.7-44.6
PSA50 responders with response ≥3 mo, %	74	
PSA90 response rate, n (%)	9 (21.4)	10.3-36.8

Response defined as a ≥50%/90% decline from baseline with confirmation ≥3 wks later.



Includes patients who received ≥1 dose, had baseline PSA ≥ 2 ng/ml, and had ≥1 post-baseline PSA evaluation

- *Median exposure: 19.2 weeks (range: 3.3-55.1 weeks); median of 5 infusions/patient*
- *All patients with objective response had >90% reduction in PSA from baseline*
- *Among 9 patients with obj. response: 4 remained on study, 5 discontinued (unrelated AEs [4] and physician decision [1])*

ORR=objective response rate, cPR=confirmed partial response, SD=stable disease, PD=progressive disease, PSA=prostate-specific antigen.

ASCO-GU 2023 (Luke, et al., #155); 12/12/22 data cut-off

Lorigerlimab: Manageable Safety Observed in Advanced Solid Tumor Population

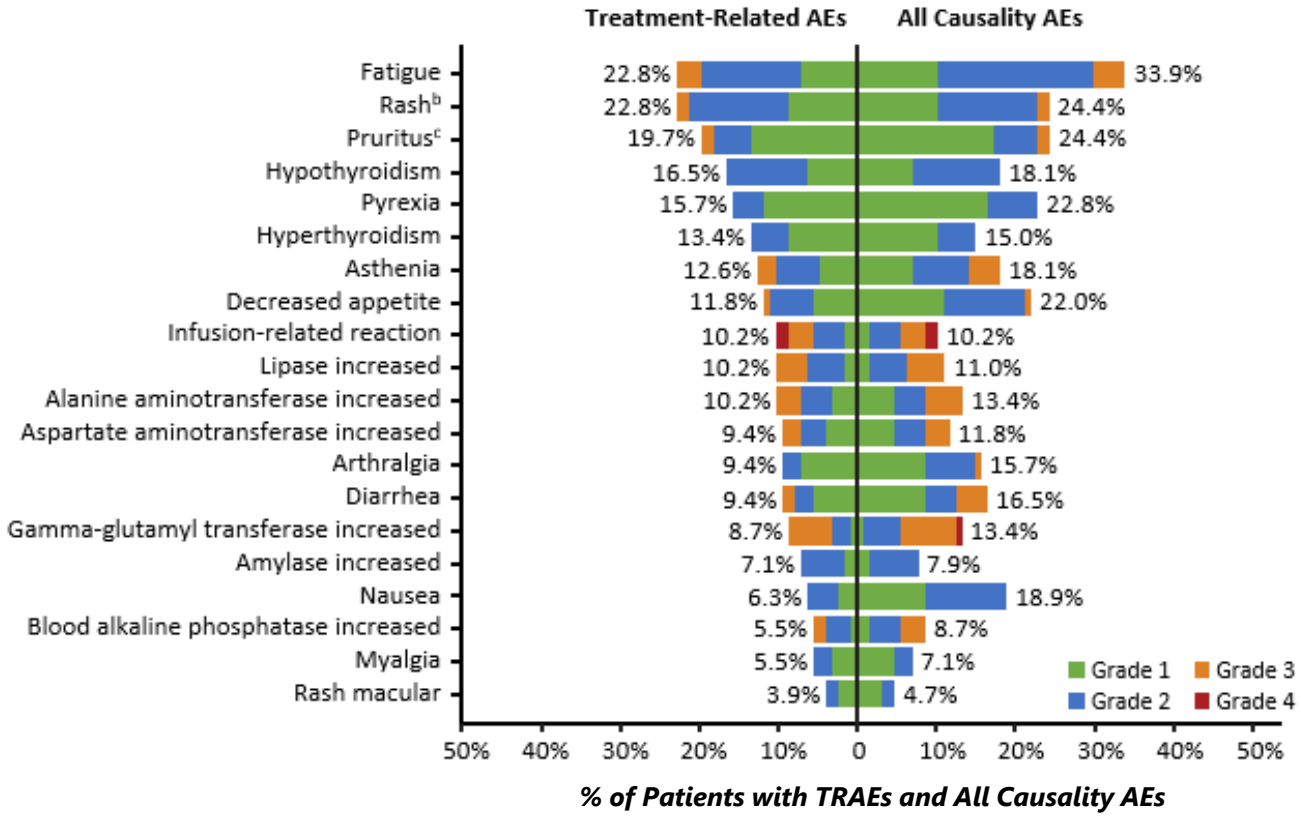
Safety population N=127 (118 patients from expansion cohorts, 9 from dose escalation)

Summary of Adverse Events

	All Grade, n (%)	Grade ≥3, n (%)
Any AE (all causality)	125 (98.4)	79 (62.2)
Treatment-related AEs	110 (86.6)	45 (35.4)
SAEs (all causality)	50 (39.4)	44 (34.6)
Treatment-related SAEs	22 (17.3)	18 (14.2)
AEs leading to lorigerlimab discontinuation	32 (25.2)	27 (21.3)
AESIs	40 (31.5)	16 (12.6)
Immune-related AEs	31 (24.4)	10 (7.9)

- ***Safety population***: *127 patients received ≥1 dose of lorigerlimab at 6 mg/kg*
- ***Median exposure***: *14.4 weeks (range: 1.9-100.1)*

Common Adverse Events



AE=adverse event, AESI=adverse event of special interest, SAE=serious adverse event, TRAE=treatment-related adverse event

ASCO-GU 2023 (Luke, et al., #155); 12/12/22 data cut-off

Background: Immune Checkpoint Inhibitors in mCRPC

	Lorigerlimab mCRPC Cohort (Interim Data)[a]	CheckMate 650[b] Phase 2 Nivolumab + Ipilimumab Part II		KEYNOTE-199[c] Phase 2 Pembrolizumab		
Previous Treatments	Median # prior lines: 2 (range: 1-9)	Post-docetaxel		Post-docetaxel and post-NHT		
N	42 (35 Measurable)	73 (43 Measurable)	74 (41 Measurable)	133 RECIST-measurable, PD-L1+	66 RECIST-measurable, PD-L1-	59 Bone-predominant disease
Dosing	6 mg/kg Q3W	Nivo (3 mg/kg) + Ipi (1 mg/kg) Q3W x 4 doses^ *(Median # ipi doses: 4)*	Nivo (1 mg/kg) Q3W x 8 doses + Ipi (3 mg/kg) Q6W x 4 doses^ *(Median # ipi doses: 2)*	200mg Q3W		
Median rPFS	NA	3.9 mos.	4.2 mos.	2.1 mos.	2.1 mos.	3.7 mos
Median OS	NA	15.9 mos.	13.5 mos.	9.5 mos	7.9 mos	14.1 mos
PSA50 response	28.6% (12/42)[d]	13.8% (9/65)	18.2% (12/66)	6%	8%	2%
ORR (%)	25.7%* (9/35)	9.3% (4/43)	19.5% (8/41)	5%	3%	NA
Treatment-Related AE Grade 3+	35.4% (N=127)	29% 1 Grade 5 Pneumonitis	30% 1 Grade 5 Colitis	15%		
AE Leading to Discontinuation	25.2% (N=127)	15% Treatment-Related	26% Treatment-Related	5% Treatment Related		

(a) Luke, et al., J Clin Oncol 41, 2023 (suppl 6; abstr 155) - ASCO-GU'23 (data cut-off: 12 December 2022); (b) Sharma, et al., J Clin Oncol 41, 2023 (suppl 6; abstr 22) - ASCO-GU'23;
(c) Antonarakis, et al., J Clin Oncol 38, 2020:395-405; (d) Lorigerlimab PSA90 23.8% (10/42 patients)
NHT=next-generation hormonal therapy (e.g., abiraterone, enzalutamide); NA=not available; AE=Adverse Event;
**=ORR calculated based on N=35 with measurable disease per RECIST v1.1 at study entry; ^=followed by nivolumab (480 mg Q4W)*

Lorigerlimab + Docetaxel: Planned mCRPC Phase 2 Study Design Summary

Study for patients who progress post-NHT; Enrollment ongoing

LORIKEET

Key Eligibility Criteria:

- mCRPC chemo-naïve patients
- Received NHT for metastatic disease
- No prior chemotherapy for mCRPC
- Prior PARPi allowed

Stratification Factors:

- Disease Location *(bone only vs. visceral)*
- Region

Total n=150 Patients

R 2:1

Lorigerlimab 6 mg/kg Q3W
Docetaxel 75 mg/m2 Q3W
Prednisone 5 mg BID

Docetaxel 75 mg/m2 Q3W
Prednisone 5 mg BID

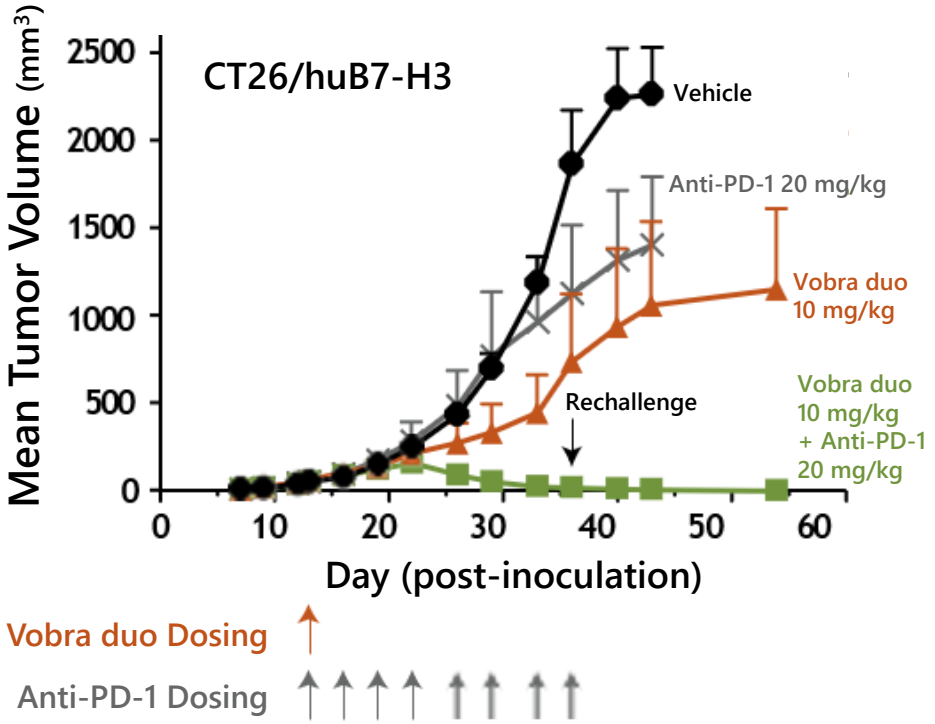
Primary Endpoint:
rPFS

Key Secondary Endpoints:
ORR[(a)], DOR, PSA50/90, Time to PSA Progression, mOS, Safety

(a) ORR measured according to Prostate Cancer Clinical Trials Working Group 3 (PCWG3) guidelines.
mCRPC=metastatic castration-resistant prostate cancer; NHT=next-generation hormonal therapy; ORR=objective response rate; PSA=prostate-specific antigen; Q3W=every 3 weeks; BID=twice per day; R=randomize; rPFS=radiographic progression-free survival; DOR=duration of response; mOS=median overall survival.

Vobra Duo + Lorigerlimab: Opportunity to Exploit Orthogonal MOAs

Preclinical Data



Phase 1 Combination Study

Ongoing 3+3 Dose Escalation[b]

Vobra Duo + Lorigerlimab
q4W dosing

Patients with multiple solid tumors

RP2D

Planned Dose Expansion (2024)

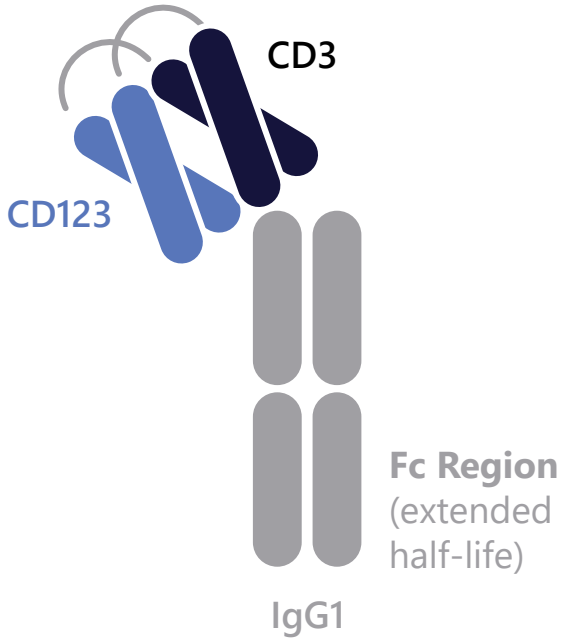
- **mCRPC**
- **Other Solid Tumors**

- Growing clinical validation around benefits of combining ADCs with immune checkpoints
- Synergy between ADCs and IO-agents can overcome treatment resistance
- Preclinical models have shown combination with anti-PD-1 enhances antitumor activity and induces immunological memory[a]

(a) *AACR 2020 - MGC018, a Duocarmycin-based Antibody-drug Conjugate Targeting B7-H3, Exhibits Immunomodulatory Activity and Enhanced Antitumor Activity in Combination with Checkpoint Inhibitors.*

MGD024: Next Generation CD123 × CD3 DART Molecule

Leverages MacroGenics' significant know-how in developing CD3-directed bispecifics



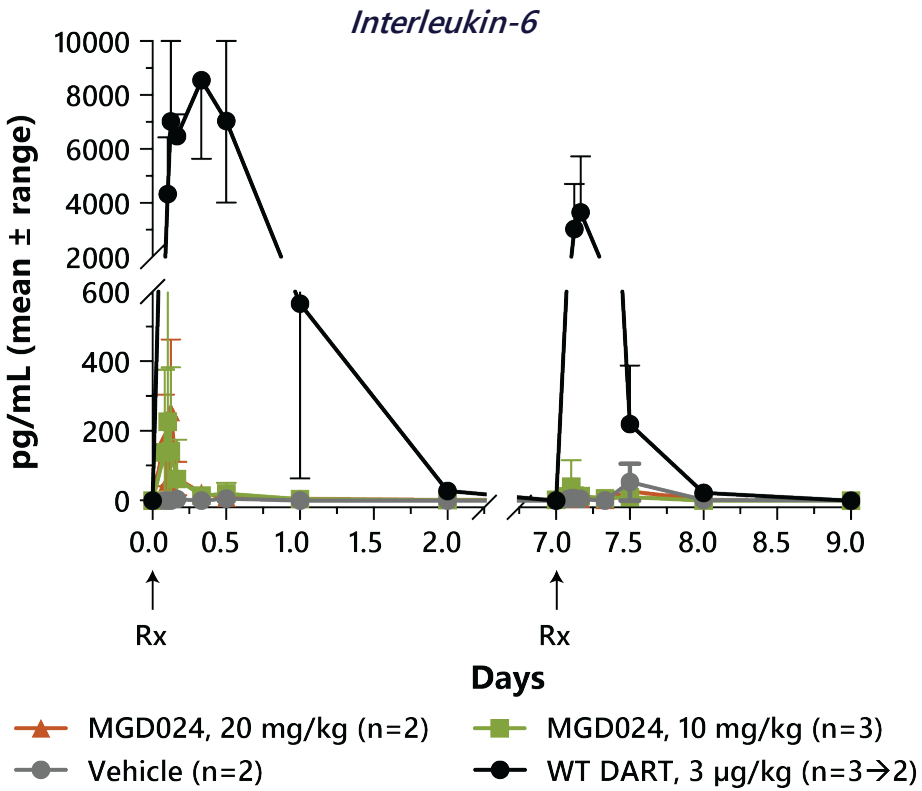
Function/ MoA	• Redirected T-cell killing against leukemia cells – Next generation CD3 variant minimizes cytokine release syndrome while maintaining cytolytic activity – Inclusion of Fc domain extends half-life to enable intermittent dosing
Results	• Preclinical data presented at ASH 2021: – Anti-leukemic activity in vitro and in murine tumor models – Good tolerability in cynos with reduced cytokine release – PK profile consistent with dosing patient on weekly basis or longer interval – Combinable with standard-of-care agents
Program Activities	• Ongoing Phase 1 dose escalation in hem. malignancies • Commenced Gilead collaboration in October 2022

MGD024 is investigational and has not yet been approved for marketing by any regulatory authority

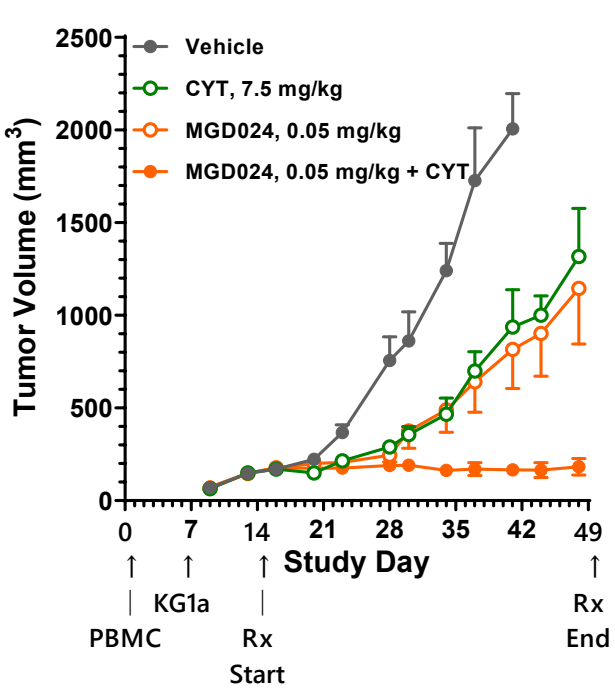
MGD024: Favorable Cytokine Profile, Encouraging Combination Activity (in vivo)

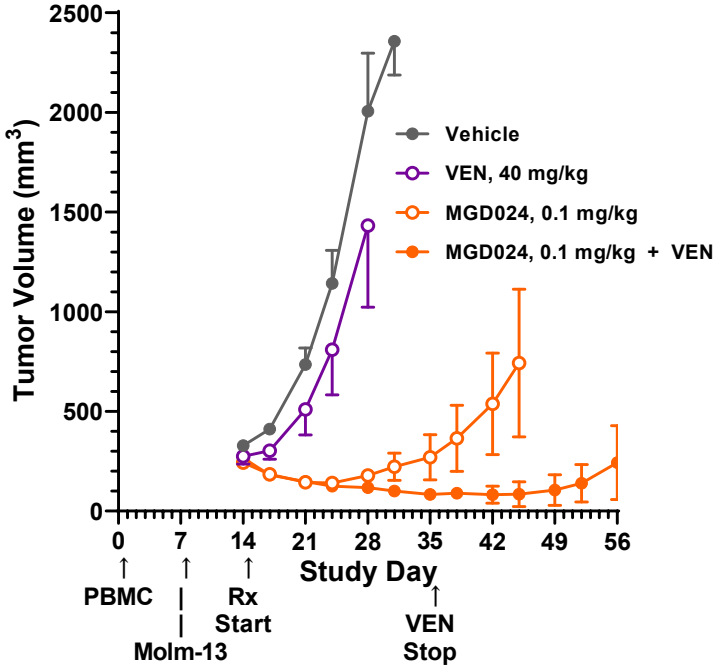
Preclinical data presented at ASH 2021

Improved Tolerability vs. Wild Type (WT) in Cynos



MGD024 Enhances Anti-tumor Activity When Combined with Either Cytarabine (CYT) or Venetoclax (VEN)





Alderson, et al., ASH 2021

Key Anticipated 2024 Program Milestones

Vobra Duo
(Anti-B7-H3 ADC)

Initial clinical data at ASCO, with update in 2H24

Initiate exp. cohorts (mid-'24)

Initiate dose exp. for combo study with lorigerlimab

MGC026
(Anti-B7-H3 TOP1i ADC)

✓ Phase 1 initiated

Preclinical data at AACR

Lorigerlimab
(PD-1 × CTLA-4 DART molecule)

Trial update 2H24

MGC028
(Anti-ADAM9 TOP1i ADC)

Preclinical data at AACR

Submit IND (2H24)

Partnered Assets – Marketed

ZYNYZ clinical and regulatory updates (Incyte)

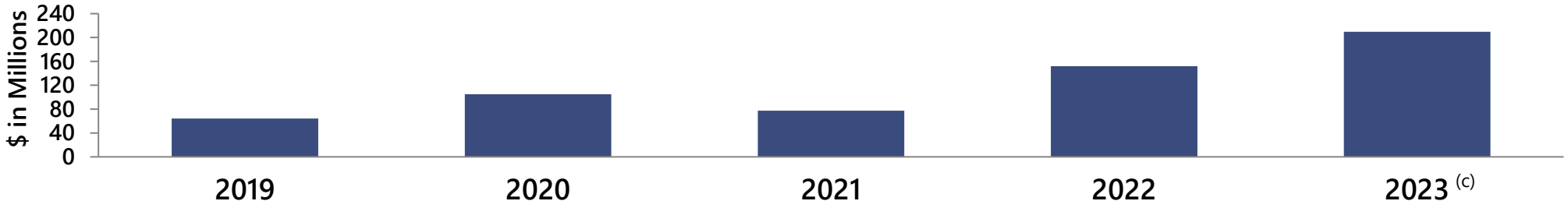
TZIELD clinical and regulatory updates (Sanofi)

Financial Overview

- $230M Cash, cash equivalents and marketable securities as of December 31, 2023
  - Cash runway *into 2026* via anticipated and potential collaboration payments and product revenues[(a)]
- Historical financial details:

$ in Millions	2019	2020	2021	2022	2023
Total Revenues	$64	$105	$77	$152	$59[(b)]
R&D Expense	195	193	215	207	167
Total Operating Expenses	241	236	280	273	227
Cash & Investments	216	273	244	154	230

- Total revenues *(primarily from collaborative agreements)*



(a) Cash runway guidance reflects anticipated expenditures related to Phase 2 TAMARACK clinical trial, Phase 2 LORIKEET study of lorigerlimab in mCRPC, and MacroGenics' other ongoing clinical and preclinical studies.
(b) Does not include $150.9 million of Other Income ("Gain on royalty monetization arrangement").
(c) Includes $150.9 million of Other Income ("Gain on royalty monetization arrangement").

Thank You!

Investor Relations Inquiries:

Jim Karrels – SVP, Chief Financial Officer
301-354-2681 | karrelsj@macrogenics.com

Business Development Inquiries:

Eric Risser – Chief Operating Officer
rissere@macrogenics.com

Harish Krishnaswamy – Vice President, BD
krishnaswamyh@macrogenics.com

www.macrogenics.com

Link to our latest presentations:
http://ir.macrogenics.com/events.cfm