



Extending the Boundaries of Targeted Cancer Therapies with Radio-DARPin and Next-Gen Immune Cell Engagers

Half-Year Financials Presentation

August 25, 2025

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Molecular Partners at a Glance

Extending the Boundaries of Targeted Cancer Therapies



DARPin
Designed Ankyrin
Repeat Protein



Our Company: MOLN

- Clinical-stage biotech company **pioneering DARPin therapeutics for patients**
- Operations & listing in Switzerland (SIX, 2014) and US (Nasdaq, 2021), founded 2004
- Financed into 2028 through key value inflection points (CHF ~114 M*)

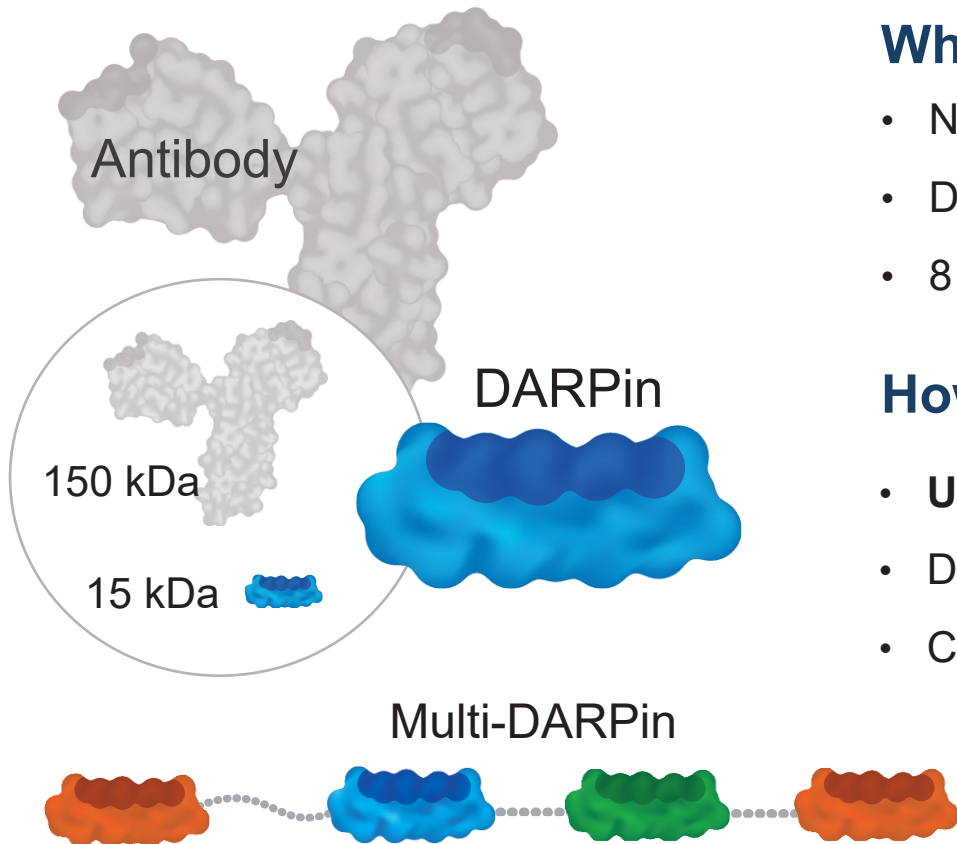
Our Capabilities: Technology, Team, Collaborations

- Proprietary DARPin Platforms, including **Radio-DARPin** and **Switch / T cell engagers**
- Strong international team to execute up to clinical POC
- Global partnerships to access technology & capabilities (Orano Med)

Our Pipeline: Patient Value

- Differentiated **Assets** with focus in **Oncology**,
- **MP0712 / Targeted radiotherapy** and **MP0533 / next-gen immune cell engagers** for patients across indications with high unmet medical need

The DARPin Modality and Molecular Partners' Strategy





What we invented

- New class of therapeutics: Designed Ankyrin Repeat Proteins (**DARPins**)
- DARPins **close the gap between small molecules and antibodies**
- 8 clinical-stage compounds, **>2500 patients treated**

How we apply it

- **Unique DARPin solutions**, not addressable by antibody designs
- Demonstrate **true patient value** with **early clinical readouts**
- Combine our **capabilities with world-class partners**

Our Pipeline – Targeted DARPin Therapeutics for Patients

PLATFORM	CANDIDATE	RESEARCH	PRE-CLINICAL	PHASE 1	PHASE 2	PHASE 3
Radio-DARPin Therapy (RDT)	MP0712	SCLC & NECs <i>²¹²Pb - DLL3</i>		 oranomed Co-development*		
	MP0726	Ovarian Cancer <i>²¹²Pb - MSLN</i>		 oranomed Co-development*		
	Undisclosed Programs	Solid Tumors		Up to 8 programs*		
Next-Gen Immune Cell Engagers	MP0533	r/r AML and AML/MDS <i>CD33 x CD123 x CD70 x CD3</i>				
	Switch-DARPin T Cell Engager	<i>CD3 x costim x TAAs</i>				
	MP0621 (Switch-DARPin)	HSCT <i>cKit x CD16a x CD47</i>				
	MP0317	Advanced Solid Tumors <i>FAP x CD40</i>				

Corporate Highlights – H1 2025

MP0712

- MP0712 (^{212}Pb x DLL3) **IND-enabling studies completed**, IND filing imminent
- Initiated imaging and dosimetry with ^{203}Pb -labeled MP0712

Radio-DARPin Therapy (RDT)

- **Strategic collaboration with Orano Med expanded to ten ^{212}Pb programs**
- Lead candidate MP0726 targeting mesothelin (MSLN) nominated based on pre-clinical data presented at AACR and SNMMI 2025

MP0533

- **Improved response rate and antitumor activity in low disease burden patients** of ongoing Phase 1/2a reported at EHA 2025
- Implemented amended dosing scheme, with cohort 9 fully recruited and ongoing

Switch-DARPin

- **Logic-gated T cell activation with co-stimulation** in solid tumors presented at AACR 2025

MP0317

- Study protocol submitted for combo IIT with standard-of-care in cholangiocarcinoma

Operations

- **Strong financial position** with CHF 114 M in cash as of June 30, 2025
- Completed strategic review of operations and organization, extending runway into 2028
- Appointed Martin Steegmaier, PhD, as CSO and member of Executive Committee*



Financial overview & Team update



H1 2025 Financial Highlights

- Strong financial position with CHF 114 million in cash (incl. short term deposits) as of June 30, 2025
- Net cash used in operating activities of CHF 30.2 million in H1 2025
- Operating loss of CHF 33.5 million in H1 2025, including a charge of CHF 2.6 million related to the June 2025 restructuring
- Guidance on FY 2025 Operating Expenses confirmed at CHF 55-65 million
- Company expects to be funded into 2028, excluding any potential payments from R&D partnerships

Key Figures H1 2025

CHF million, except for per share and FTE data	H1 2025	H1 2024	Change
Revenues	-	4.3	(4.3)
Total operating expenses ¹	(33.5)	(36.1)	2.6
Operating result	(33.5)	(31.8)	(1.7)
Net financial result	(3.7)	5.4	(9.1)
Net result	(37.2)	(26.4)	(10.8)
Basic net result per share (in CHF)	(1.0)	(0.8)	(0.2)
Net cash used in operations	(30.2)	(32.8)	2.6
Cash balance (including short-term time deposits) as of June 30	114.5	159.1	(44.6)
Number of FTEs as of June 30	153.0	161.9	(8.9)

¹ Including a CHF 2.6 mio charge related to the June 2025 restructuring

Martin Steegmaier, PhD

- Appointed as Chief Scientific Officer (CSO) and member of the Executive Committee, effective October 1, 2025
- Deep experience in oncology drug development, including advancement of innovative cancer therapies at major biotech and pharma companies:
 - CSO at SOTIO Biotech (IO-therapies & ADCs for oncology)
 - Head of Research at MorphoSys (antibody-based therapeutics in oncology)
 - Head of Discovery for Large Molecule Research at Roche Innovation Center (Munich) (antibodies, TCEs, ...)
- Ph.D. in biochemistry from the University of Basel
- MBA from the Edinburgh Business School





MP0533

Tetra-specific T-cell Engager for AML

MP0533 Enables T Cell-Mediated Killing of AML Blasts and Stem Cells

r/r AML: critical unmet need, quick relapse despite new treatments

- 5-year OS ~30%; fast-progressing disease
- Leukemic stem cells drive relapse

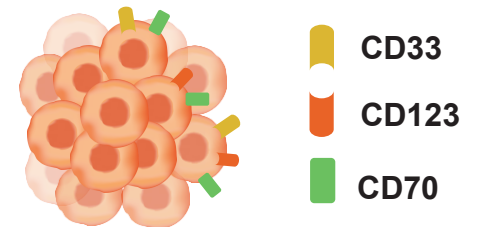
CD123, CD33, CD70: broadly expressed targets on AML cells

- Co-expressed on blasts and leukemic stem cells across patients
- Single or no expression on healthy cells
- Clinically validated targets with mono-targeting treatments (ADCs, mAbs)

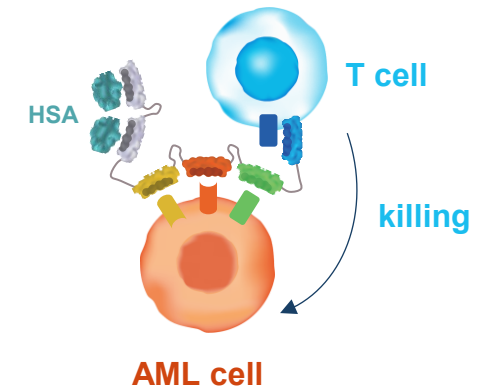
MP0533: avidity-driven, tetra-specific T-cell engager

- Preferential killing of AML blasts and leukemic stem cells, while sparing healthy cells
- Broad patient population: amenable to chemo-resistant patients, mutation-agnostic
- Attractive therapeutic index with acceptable safety and demonstrated efficacy

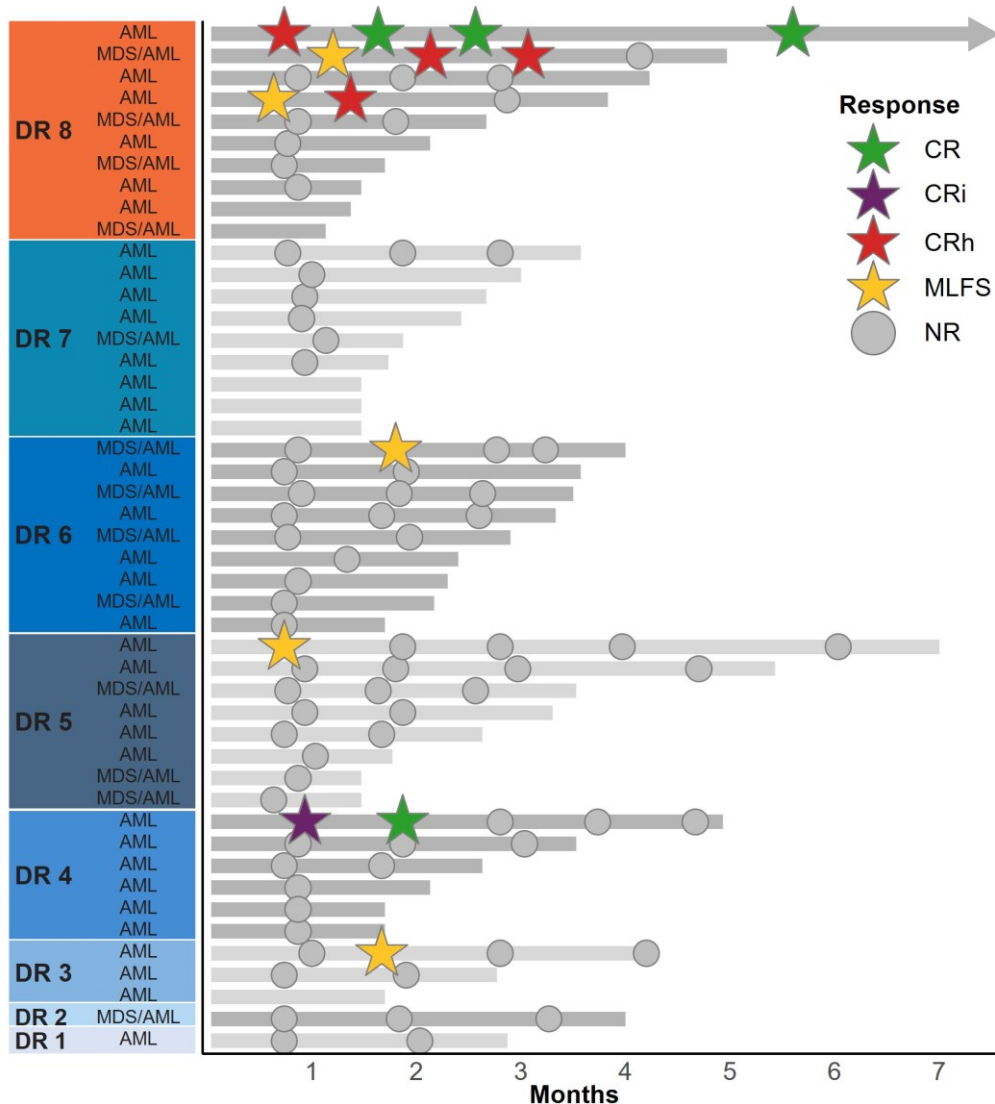
AML cells & targets



MP0533 & mode of action



Encouraging Clinical Responses Observed with Intermediate Densification



Improved response rate and depth observed in Cohort 8:

- **DR 1–7** – 4 of 33 evaluable patients achieved a response: 1 CR (DR 4) and 3 MLFS (1 each DR 3, 5, 6)
- **DR 8** – with the accelerated step-up dosing, 3 of 8 evaluable patients responded after cycle 1: 1 CR and 2 CRh as best overall response
- One patient in DR 8 is still on treatment and shows a response duration of at least 6 months (at data cut-off)

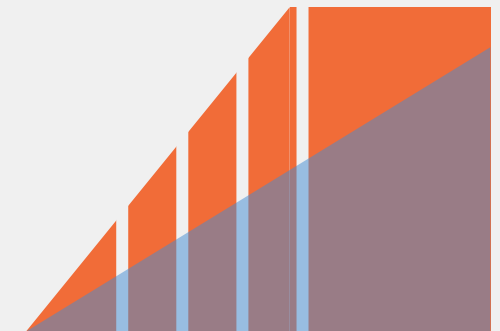
Dose escalation (DR 1–7)

- Limited clinical activity
- Loss of exposure driven by TMDD and ADAs in some patients

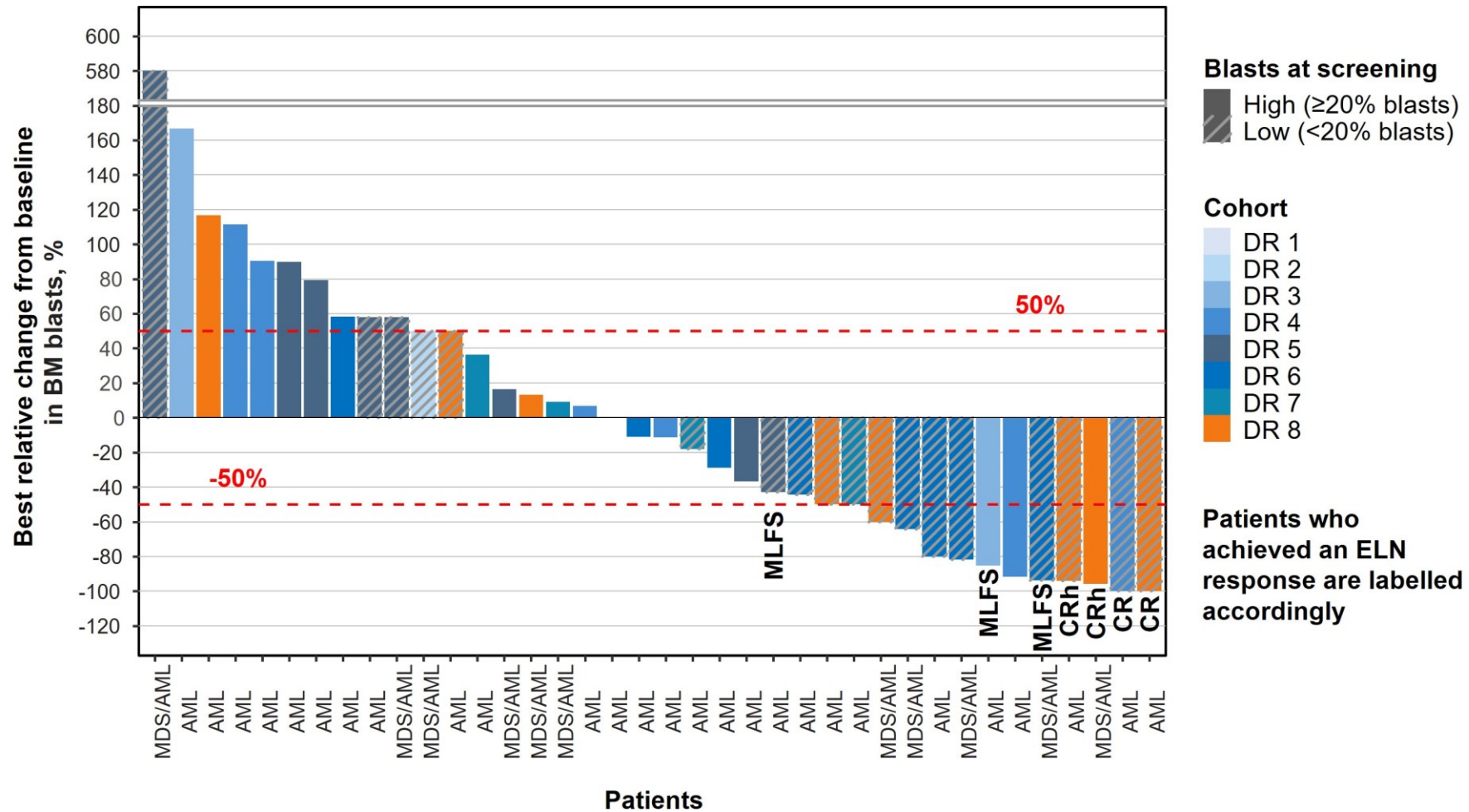


Intermediate densification (DR 8)

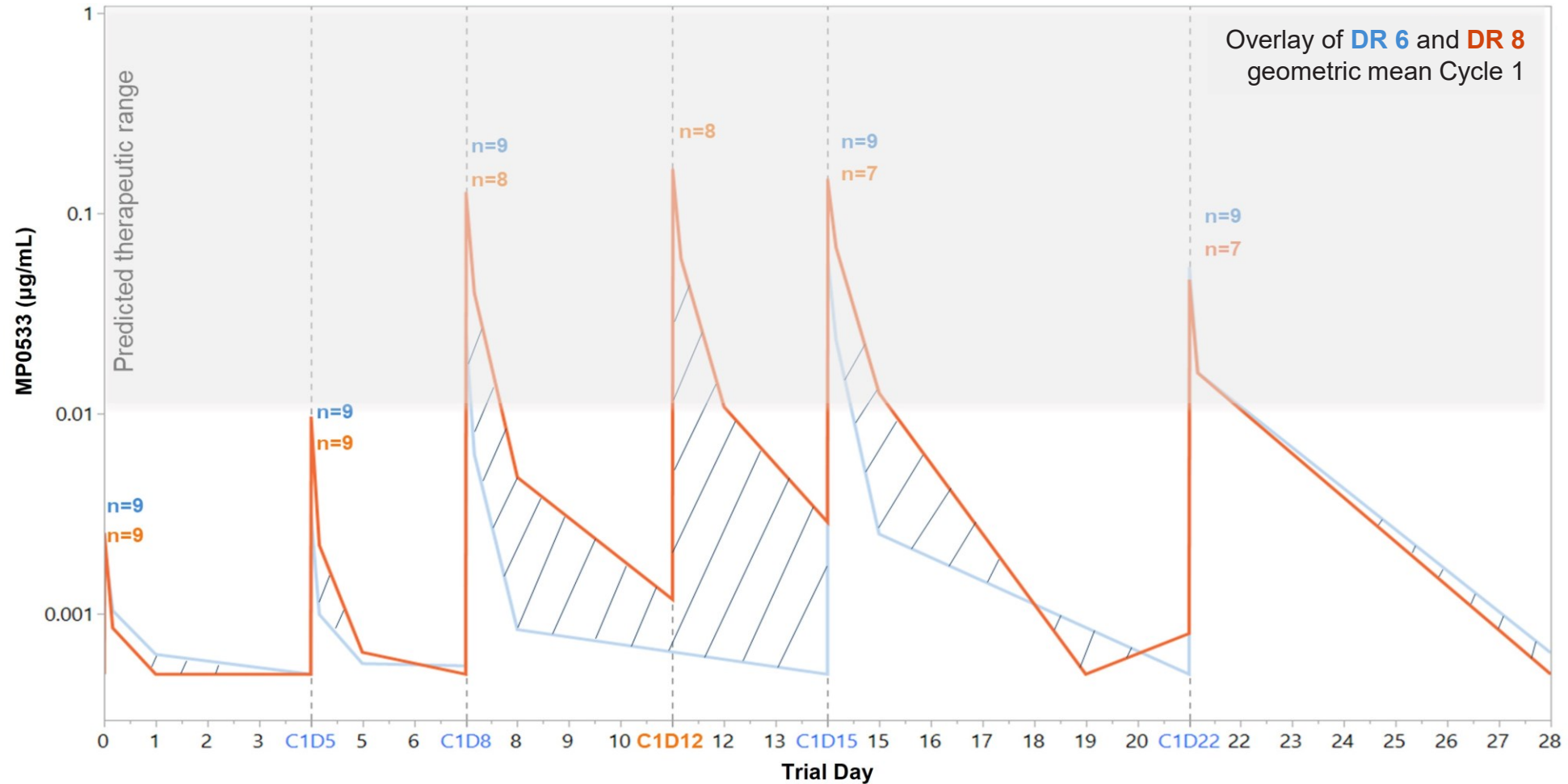
- **Additional Day 12 dose for steeper & faster dose escalation, addressing TMDD**



Encouraging Blast Reduction Observed, Particularly in Patients with Lower Disease Burden at Baseline*



Improved MP0533 Exposure Achieved with Steeper and Denser Step-up Dosing Regimen in DR 8



Further Dose Densification to Demonstrate Full Potential of MP0533

Protocol amendment to optimize MP0533 exposure

Summary of DR 1–8 data¹

	N (evaluable patients)	Days exposed to predicted therapeutic range in cycle 1	Patients with >50% blast reduction	Response rate (number of responders)
DR 1–7	33	< 2 days	30%	12 % (4)
DR 8	8	4 days	60%	37.5 % (3)

Objectives of protocol amendment (DR 9–10):

- Improve the exposure profile of MP0533 in patients
- Increase depth and duration of clinical responses

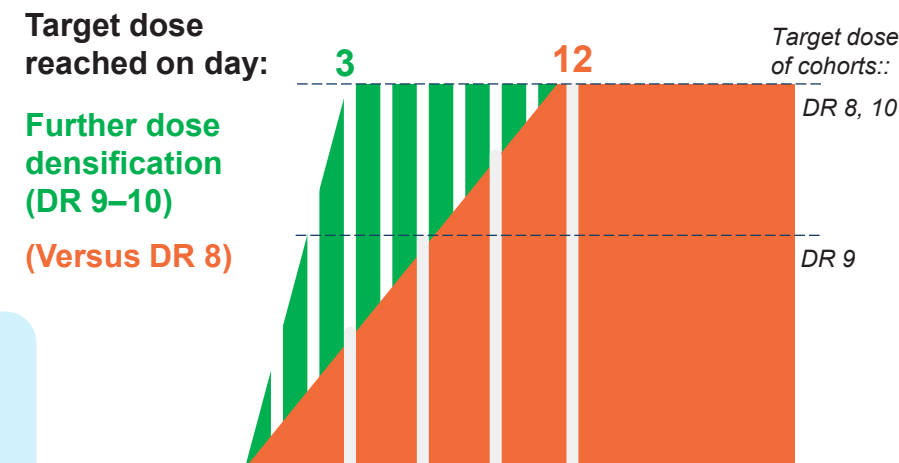
How:

- Dose densification (accelerated step-up dosing & higher dose frequency) to overcome TMDD
- Premedication with B cell-depleting agent to mitigate loss of exposure

Outlook: Initial data from DR 9 in H2 2025

- Start of DR 10 in H2 2025, pending recommendation of investigators
- Combo trials (aza/ven) initiation in 2026 pending decisional data of cohorts 9-10

Amended Dosing Scheme*





MP0712 & Radio-DARPin Therapy

Custom-engineered to create
vectors ideal for radiopharmaceuticals



Radio-DARPin as Versatile Therapeutic Candidates

Combining versatile DARPin features with the power of ^{212}Pb for next-gen Targeted Alpha Therapy

DARPin: IDEAL VECTOR FOR RADIOPHARMACEUTICALS

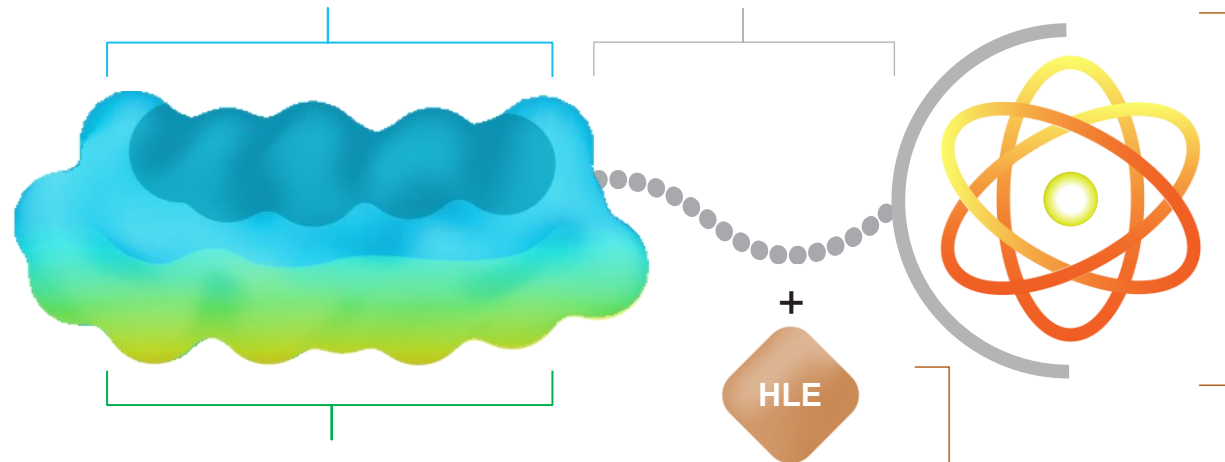
- Proven selective targeting
- High affinity, tumor retention
- Broad target space
- Small size

LINKER & CHELATOR

- Established DOTAM

^{212}Pb : ALPHA-EMITTING THERAPEUTIC ISOTOPE

- Proven clinical efficacy
- Fast & high energy deposition
- Safe profile
- Ideal waste management



SURFACE ENGINEERING

- High stability
- Reduce kidney accumulation

HALF-LIFE EXTENDER

- Half-life tuning
- Promote tumor uptake

MP0712, the first ^{212}Pb -DLL3 Targeted Radiotherapeutic for SCLC

SCLC: critical unmet need, limited treatment options

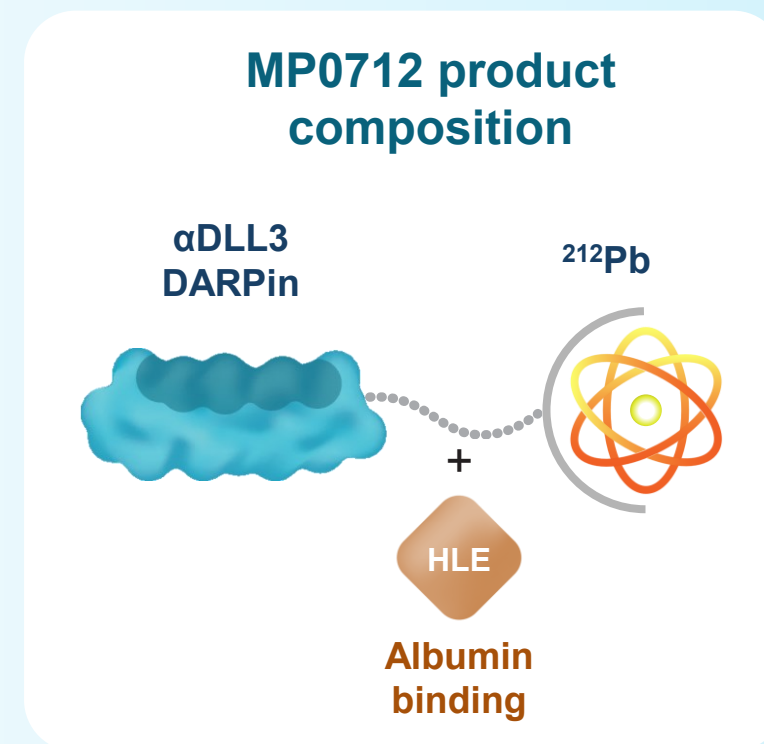
- Median progression free survival (mPFS) ~3 months^{1,2}
- 5-year overall survival (OS) ~3%^{1,2}

DLL3: a validated target for SCLC

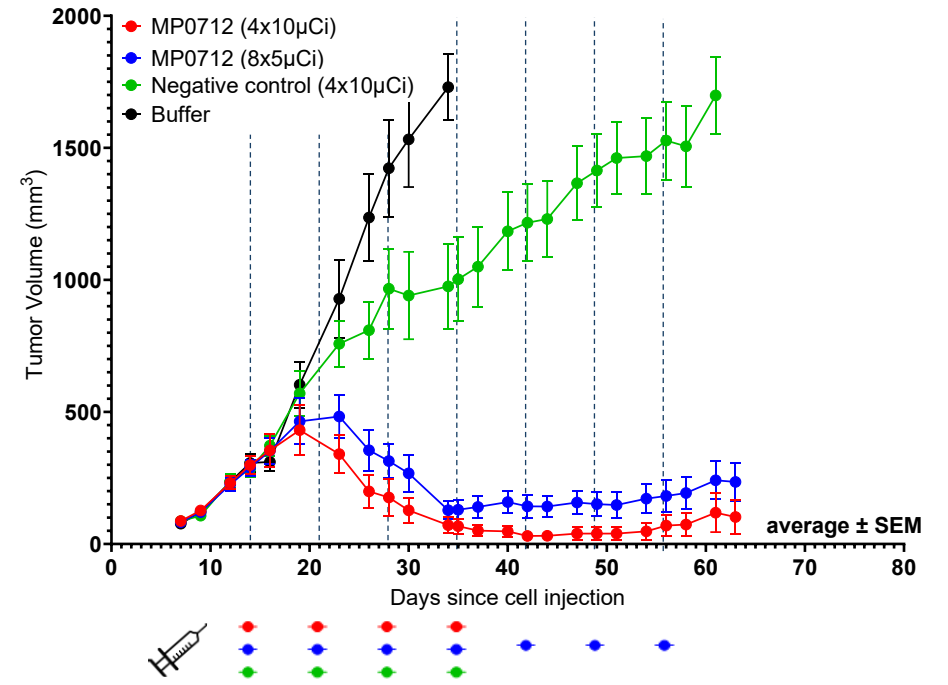
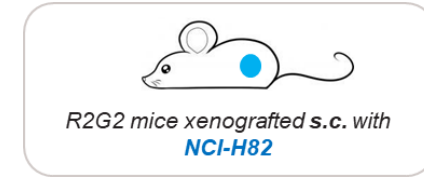
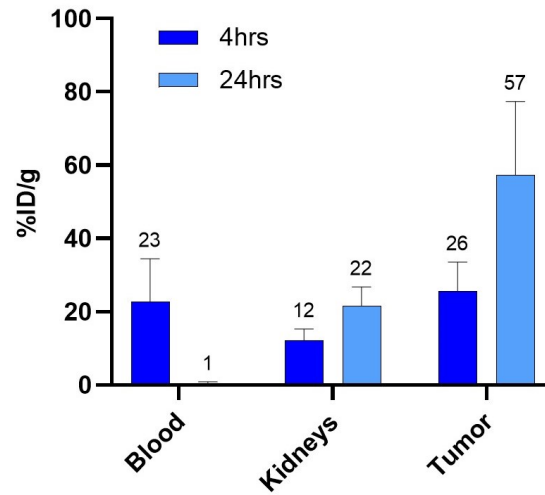
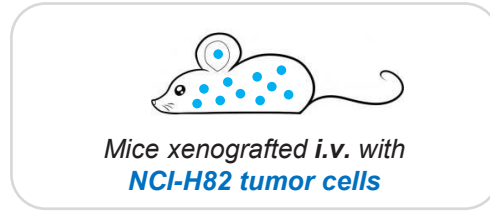
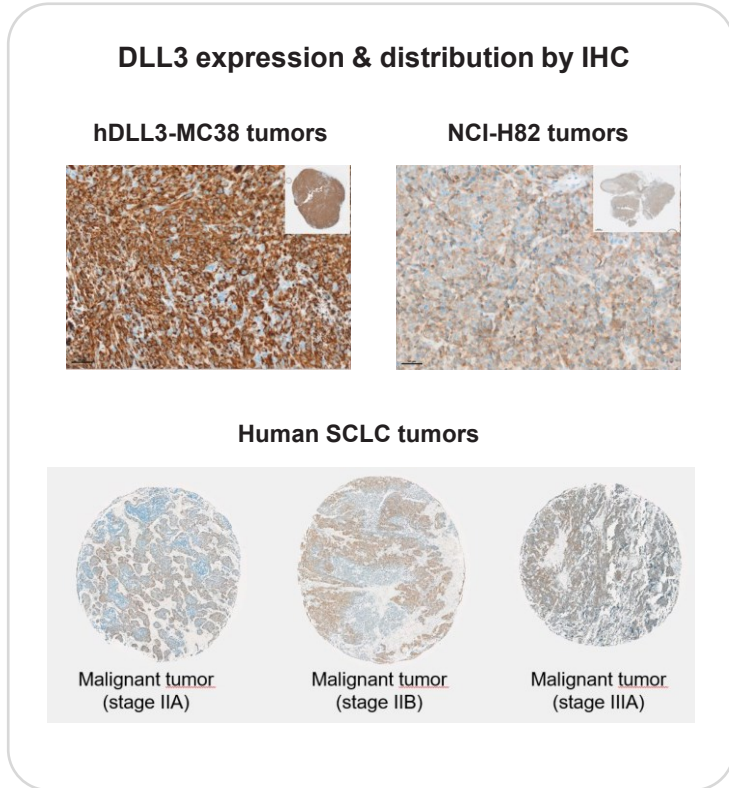
- Expressed in >85% of SCLC patients³ and in neuroendocrine cancers
- No expression in healthy tissues
- Tarlatamab⁴, approved DLL3 targeting drug (T cell engager)
 - ORR ~40%, DOR 9.7 months, PFS 4.3 months

MP0712: targeted delivery of alpha radiation with ^{212}Pb

- DLL3 DARPin optimized for selective delivery of payload to tumor
- ^{212}Pb payload: high energy alpha emissions in short time frame
- Potential for combinations with immunotherapy



MP0712: Potent Efficacy at Clinically-Relevant Dose



- MP0712 reached T:K ratios > 2 in mouse model matching clinically relevant DLL3 expression levels
- MP0712 induces complete and durable tumor regression in NCI-H82 tumor model at 10 µCi injected every week

Outline of MP0712 Clinical Development Strategy

- Patients: Focus on small cell lung cancer (SCLC), secondly on neuro-endocrine cancers (NECs)
- Imaging and dosimetry ongoing, initial data* expected by YE 2025
- **Phase 1 study to start in H2 2025, initial safety and efficacy data in 2026**

PHASE 1/2a STUDY



Phase 1: ^{212}Pb Dose Escalation

Main objective: safety, RP2D; N=15–27 patients

Phase 1 includes an imaging and dosimetry step with ^{203}Pb

Phase 2a – Dose Expansion and PoC – SCLC+NEC

Main objective: efficacy signals, confirm RP2D; N=30 patients

Registration study

2L+ SCLC patients

Phase 2

- 1–2L combination with IO SCLC
- Registration in patients with other NECs

**Molecular Partners has received and accepted a request from Nuclear Medicine Research Infrastructure (NuMeRI) in South Africa to provide MP0712 for imaging use under the legal framework in South Africa for compassionate care (also referred to as Section 21 of the Medicines and Related Substances Act). This approach enables the generation of first images applying MP0712 labelled with ^{203}Pb in patients with SCLC. While the decision of where and how to share data from the image work under Section 21 remains at the discretion of NuMeRI, the Company anticipates providing an update on MP0712 in H2 2025.*

MP0726, ^{212}Pb x MSLN Radio-DARPin for Ovarian Cancer (OC)

OC: high medical need and marginal progress

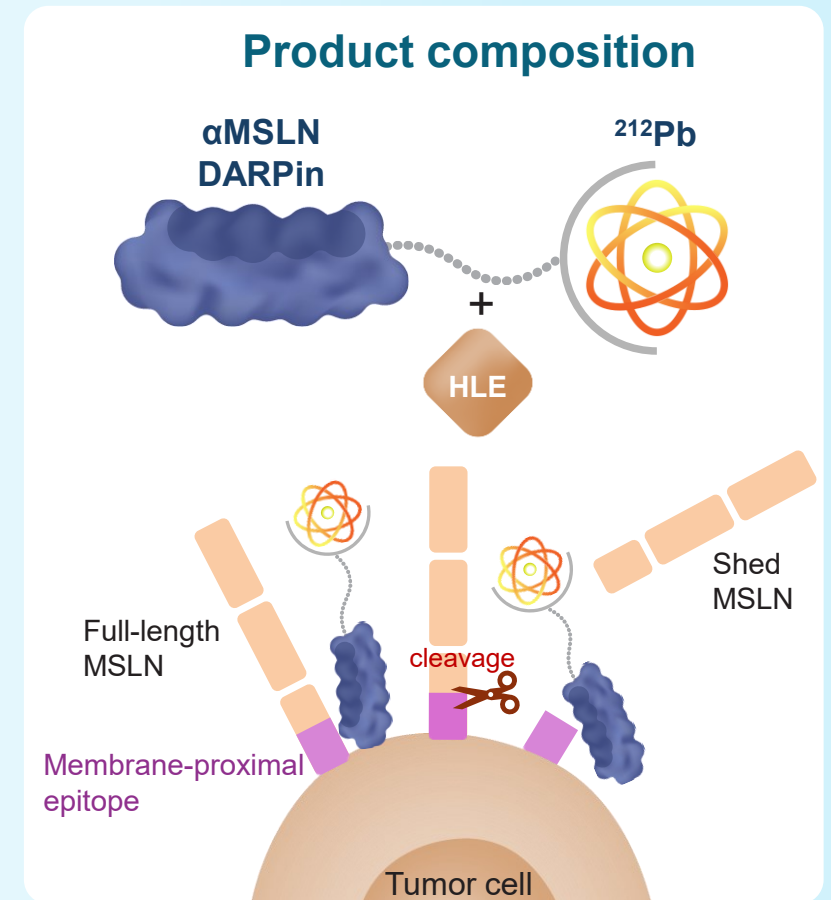
- > 50% patients die within 5 years post-diagnosis (diagnosis often in late stage)
- Poor treatment options: ~80% recurrence rate post 1L chemo, limited 2L options (FR α -targeted Tx relevant for only 40% patients)

MSLN: a promising target for OC as 1st indication

- Highly expressed in OC (>80% prevalence), expression maintained in metastases
- Shed MSLN detected in serum of OC patients, might limit efficacy of MSLN-targeted therapies^{1,2,3,4} (e.g., CAR T/NK, ADC, TCE in development)

RDT x MSLN: targeted delivery of alpha radiation with ^{212}Pb

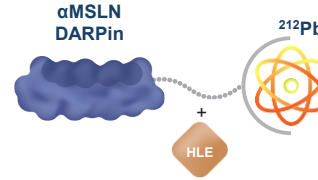
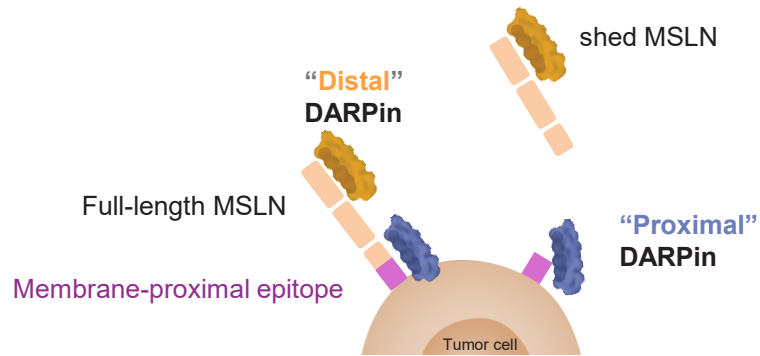
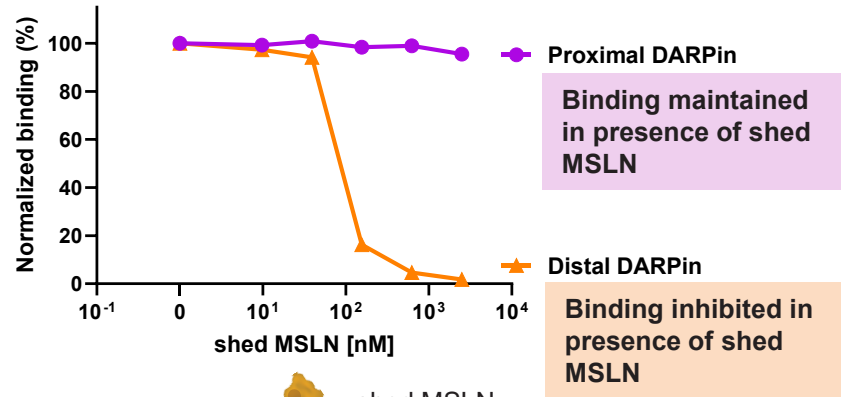
- MSLN DARPin targets **membrane-proximal epitope** (and not shed MSLN)
- ^{212}Pb payload: high energy alpha emissions in short time frame
- Potential for combinations with immunotherapy (incl. next-gen TCEs)



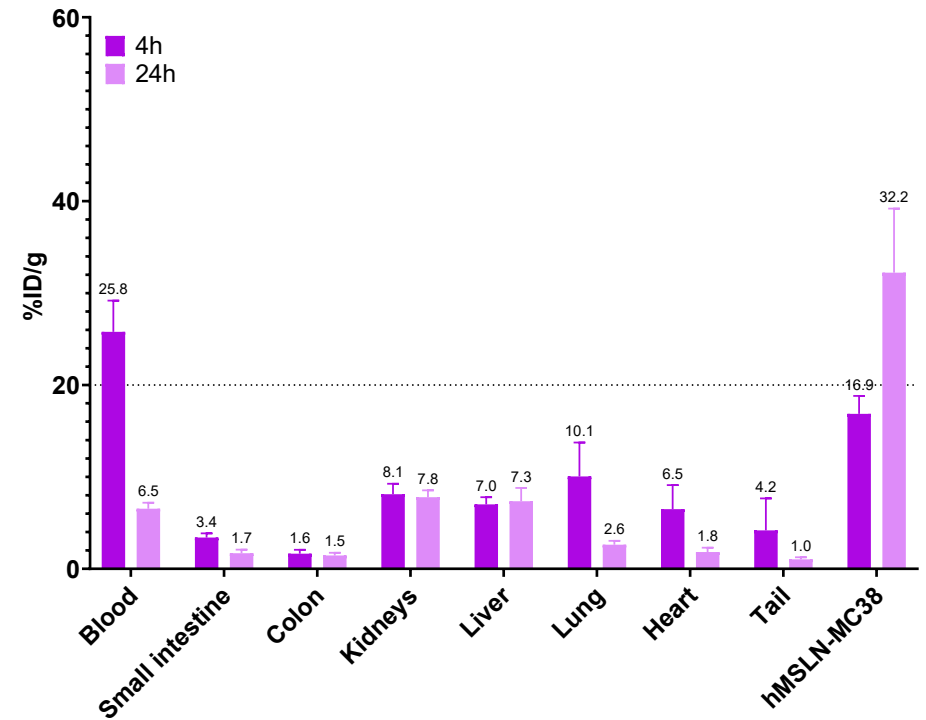
Attractive Biodistribution Profile of MSLN Radio-DARPin

Cell binding maintained despite shed MSLN

OVCAR-8 Cell binding competition assay
100nM DARPin with increasing concentration of shed MSLN



Favorable biodistribution in hMSLN-MC38 tumor model



Outlook: Progress MP0726 into development, with initial clinical data expected in 2026

Global Partnership to Develop ^{212}Pb Radio-DARPin Therapeutics

Combining DARPin versatility with the power of ^{212}Pb for next-gen Targeted Alpha Therapy



MOLECULAR PARTNERS
PIONEERS of DARPin THERAPEUTICS



ORANO MED

PIONEERS of TARGETED ALPHA THERAPY



FULL VALUE CHAIN PARTNERSHIP

World class technologies & capabilities combined



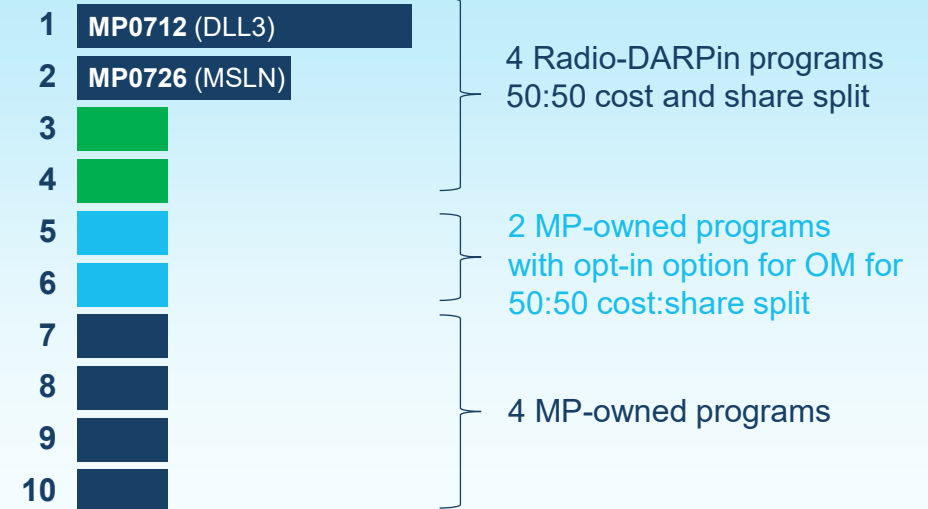
INDIANA, US:
Industrial scale manufacturing
Global shipping hub
ATLab US

TEXAS, US:
Preclinical development
GMP supply for early
clinical phases

SWITZERLAND:
Preclinical assessment
DARPin engine, fast &
high throughput

FRANCE:
 ^{212}Pb starting
material
ATLab Europe

Pipeline of ten ^{212}Pb radiotherapy products



Our Partner Orano Med – Pioneer of Targeted Alpha Therapy

Targeted Alpha Therapy with ^{212}Pb

Alpha therapy

- **High cytotoxicity:** DNA double-strand break, high energy deposition, no need for receptor internalization
- **Targeted effect:** short range of action with potential to target microlesions, less impact on healthy tissues

Lead-212 (^{212}Pb)

- **Short-half life** (~11 h): out-patient administration, easy waste management, high-dose rate, flexible dosing
- **Clean decay** with single alpha emission and effective chelating agent, limiting circulation of free daughter isotopes

Orano Med as Pioneer of ^{212}Pb Targeted Alpha Therapy

- Unique, independent **supply of ^{212}Pb** as alpha emitting therapeutic isotope
- **Large scale GMP manufacturing capabilities**
- Fully integrated research and preclinical development platform
- **Clinical capabilities** demonstrated with ^{212}Pb and lead program AlphaMedix™, outlicensed to Sanofi in Sept 2024, in Phase 2
- Strong collaboration partner with MP since early 2023

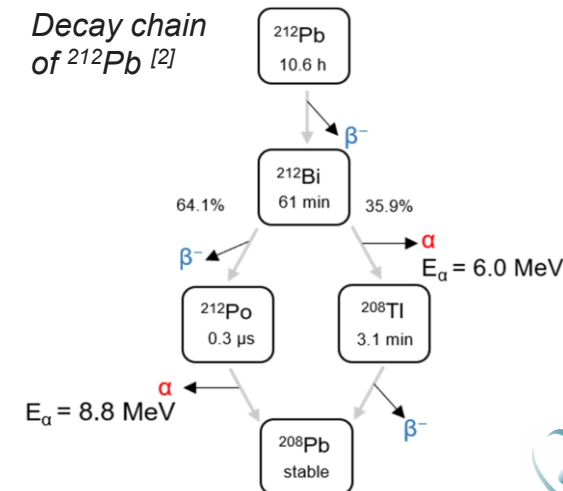


22,000 drums of ^{232}Th



Lead-212 is obtained **chemically** by **successive extractions and purifications** of the descendants of thorium-232

Decay chain of ^{212}Pb [2]



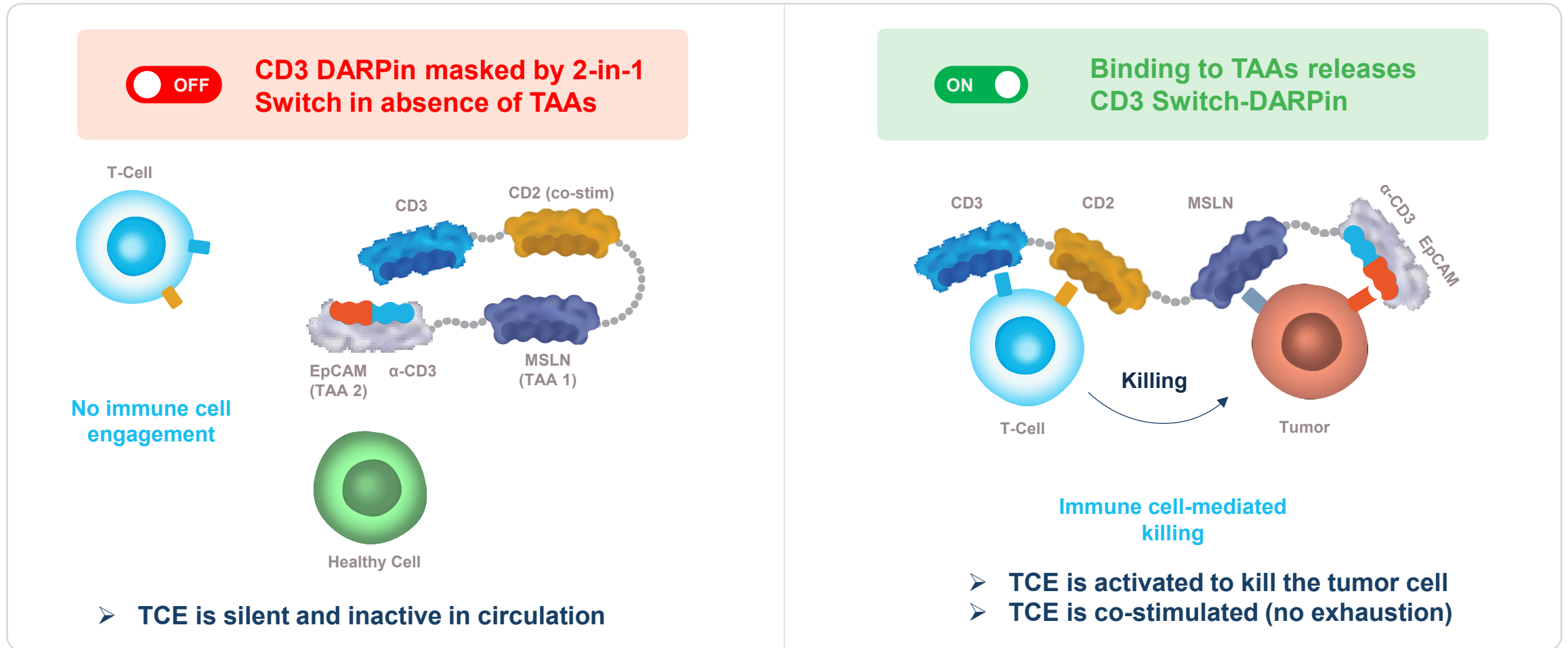


Switch-DARPin Platform

Next-generation T cell engagers

CD3 Switch-DARPin for Next-Gen TCEs with Enhanced Function

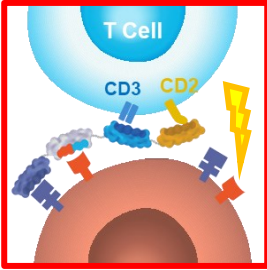
Tackling current limitations of TCEs in solid tumors



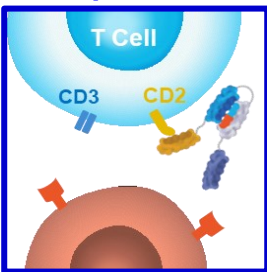
Next update on CD3 Switch T cell engager at SITC 2025

MSLN x EpCAM x CD2 x CD3 Switch-DARPin Enables “AND-Gate” for Preferential Targeting of Double vs Single TAA Expressing Cells

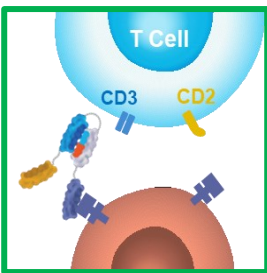
EpCAM+ MSLN+



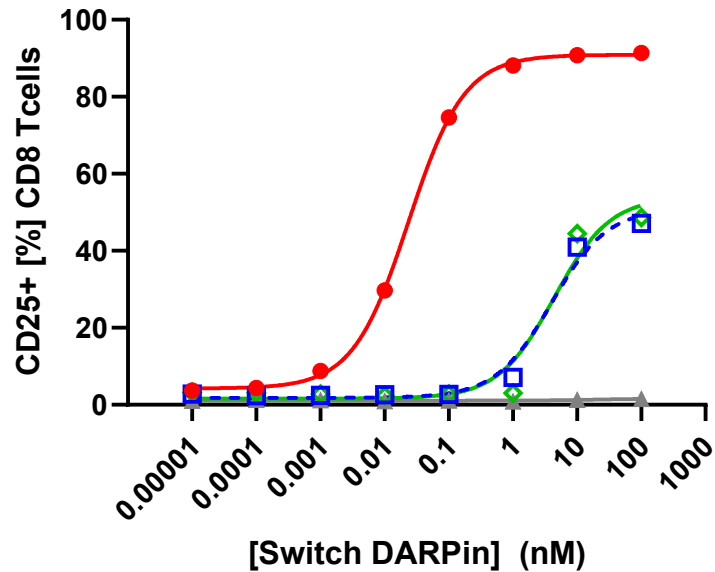
EpCAM+



MSLN+



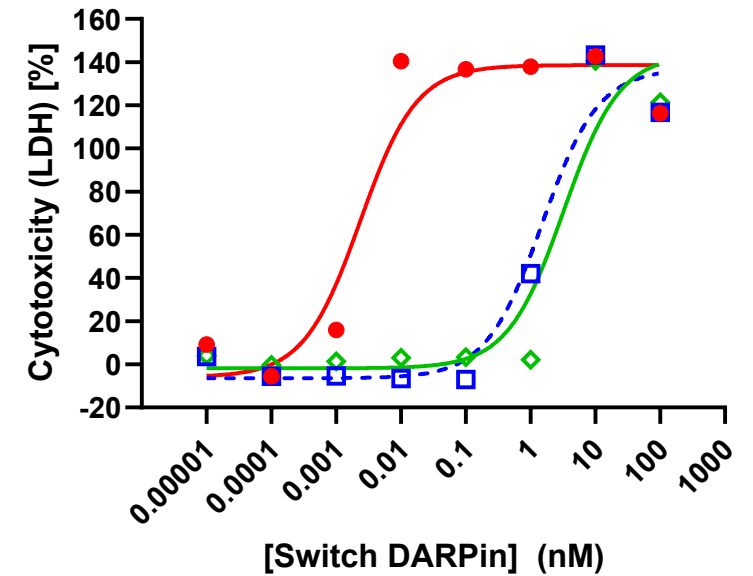
T-cell Activation



- CHO-MSLN/EpCAM
- CHO-EpCAM
- ◆ CHO-MSLN
- ▲ PanT only, no target cells

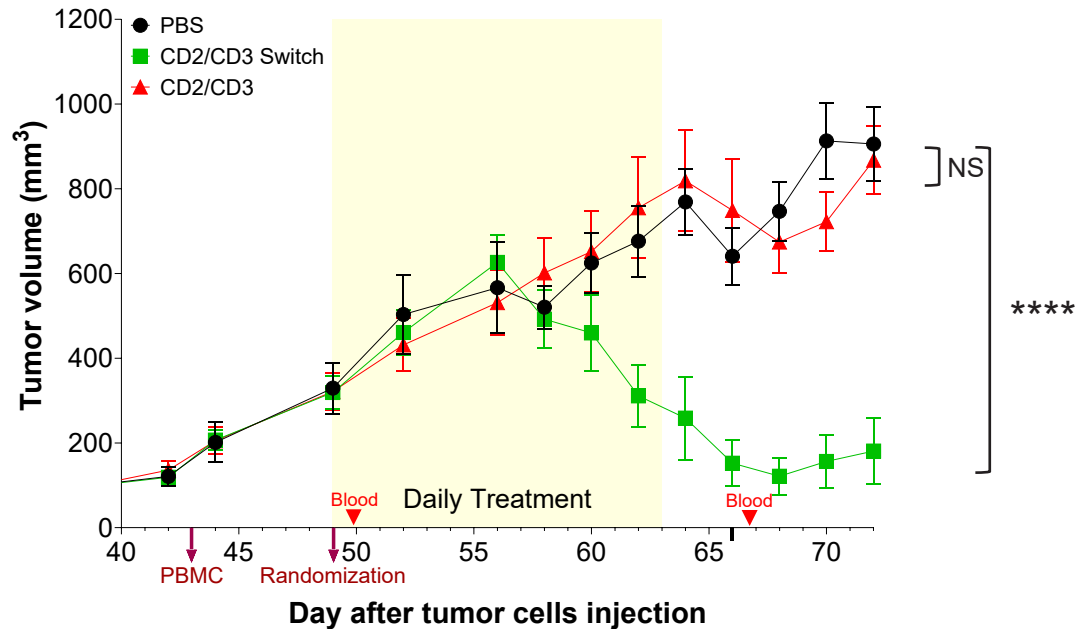


Target cell killing



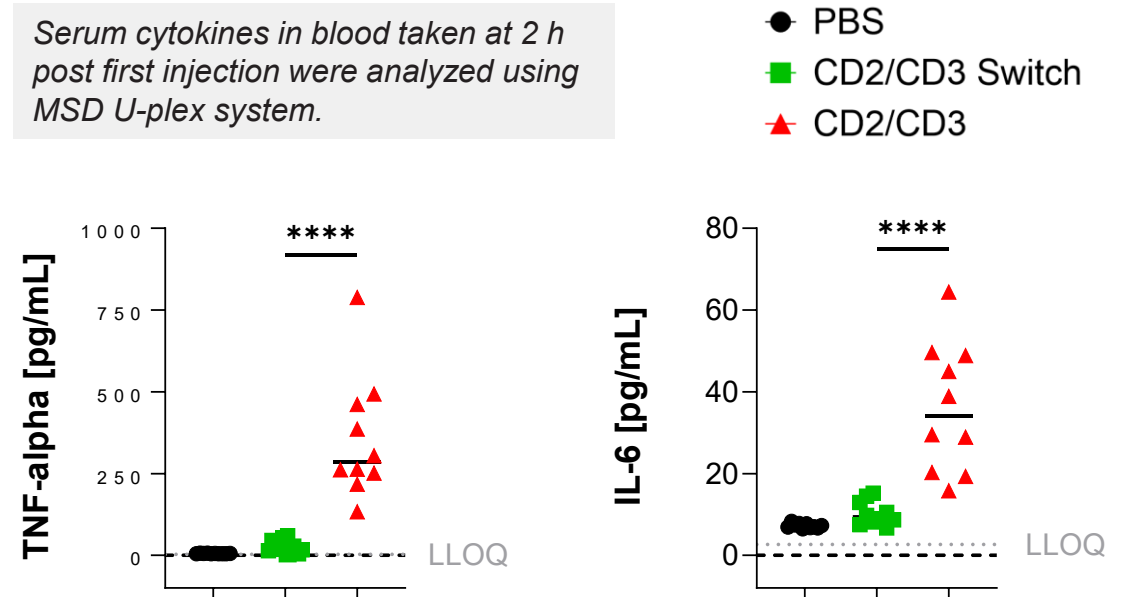
CD3 Switch-DARPin with CD2 Co-Stimulation Induces Tumor Regression

Antitumor activity in OVCAR-3 xenograft model



Safety of CD2/CD3 Switch: *in vivo* cytokine release

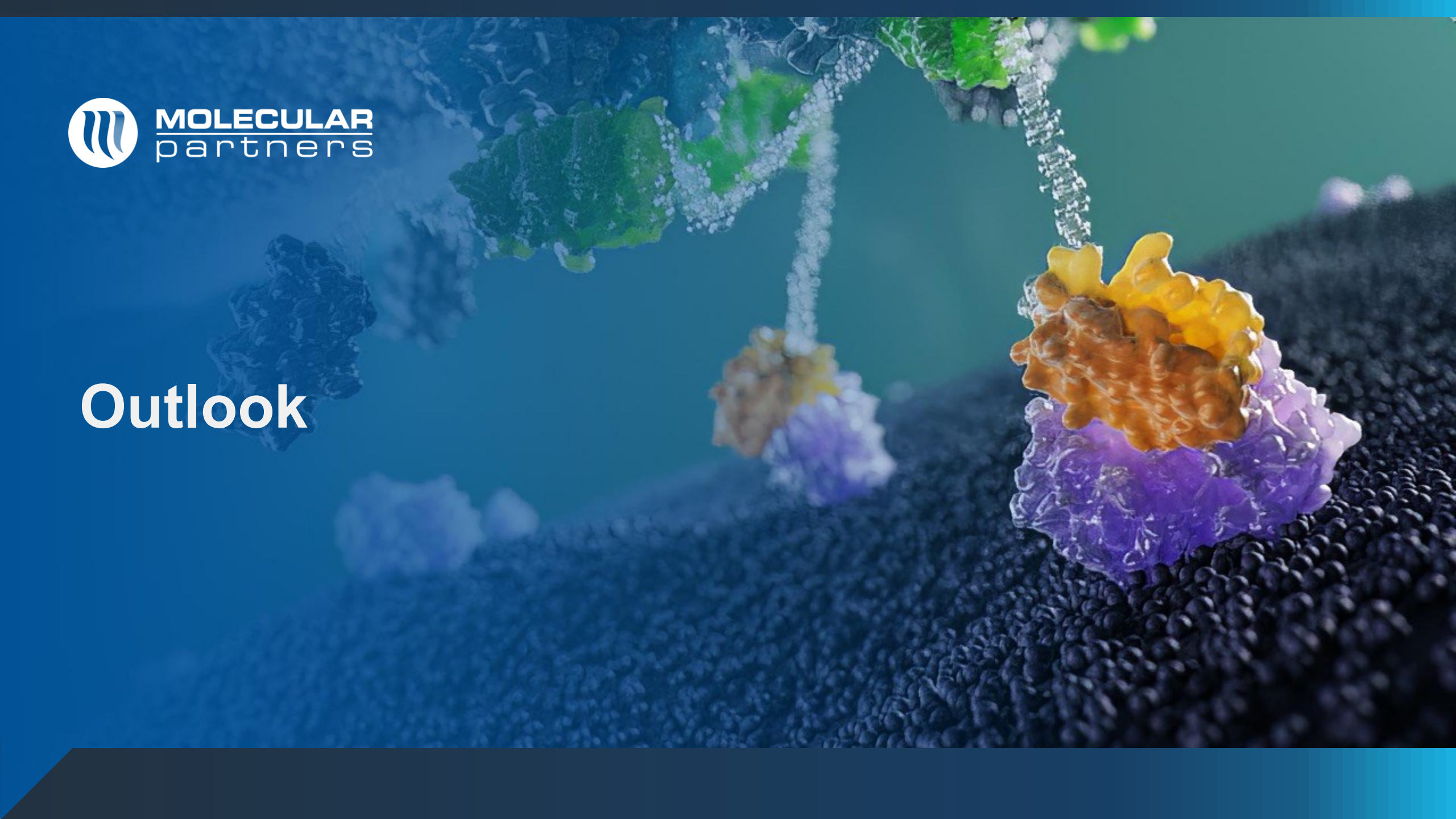
Serum cytokines in blood taken at 2 h post first injection were analyzed using MSD U-plex system.



- Masking of CD3 allows the safe use of strong CD3 and co-stimulation binders in one molecule
- Also confirmed in human whole blood cytokine release assay



Outlook



Outlook and Upcoming Milestones

MP0712

- **First-in-Human Phase 1 study to start in 2025**, IND filing expected in Q3 2025
- Update on early imaging work anticipated in Q4 2025
- Initial safety data anticipated in H1 2026

Radio-DARPin Therapy (RDT)

- Progress second RDT program **MP0726**, with initial clinical data expected in 2026
- Nomination of additional ^{212}Pb x RDT programs in collaboration with Orano Med

MP0533

- **Initial data from amended dosing scheme** (cohort 9) in H2 2025
- Combo trials (aza/ven) initiation in 2026 pending decisional data of cohorts 9-10

Switch-DARPin

- **Preclinical update on CD3 Switch-DARPin T cell engager program** at SITC 2025
- Selection of a first Switch-DARPin candidate

MP0317

- Investigator-initiated combo study start in 2025, pending regulatory approval

CHF ~114 M cash* (incl. short-term time deposits) ensures funding into 2028



*Twenty Years of Pioneering
DARPin Therapeutics for Patients*

Thank You

