



Unlock and Expand: Custom Built Biology for Patients

Molecular Partners AG, Switzerland
(SIX: MOLN)



Disclaimer

This presentation is made pursuant to Section 5(d) of and/or Rule 163B under the Securities Act of 1933, as amended (“test-the-waters”), and is intended solely for investors that are qualified institutional buyers or institutional accredited investors solely for the purposes of familiarizing such investors with Molecular Partners AG and determining whether such investors might have an interest in a securities offering contemplated by the Company. Any such offering of securities will only be made by means of a registration statement (including a prospectus) filed with the SEC. No such registration statement has been publicly filed or become effective as of the date of this presentation. This presentation shall not constitute an offer to sell or the solicitation of an offer to buy these securities, nor shall there be any sale of these securities in any state or jurisdiction in which such offer, solicitation or sale would be unlawful prior to registration or qualification under the securities laws of any such state or jurisdiction.

This presentation is not an offer to sell or a solicitation of offers to purchase or subscribe for shares of Molecular Partners AG, nor shall it or any part of it nor the fact of its distribution form the basis of, or be relied on in connection with, any contract or investment decision. This presentation is not an offering circular within the meaning of Article 652a of the Swiss Code of Obligations, nor is it a listing prospectus as defined in the listing rules of the SIX Swiss Exchange AG or a prospectus under any other applicable laws. Copies of this presentation may not be sent to countries, or distributed in or sent from countries, in which this is barred or prohibited by law. This document is not a prospectus or a prospectus equivalent document and investors should not subscribe for or purchase any securities referred to in this document. This document does not constitute a recommendation regarding the shares.

This presentation contains specific forward-looking statements, beliefs or opinions, including statements with respect to the product pipelines, potential benefits of product candidates and objectives, estimated market sizes and opportunities as well as the milestone potential under existing collaboration agreements, which are based on current beliefs, expectations and projections about future events, e.g. statements including terms like “potential”, “believe”, “assume”, “expect”, “forecast”, “project”, “may”, “could”, “might”, “will” or similar expressions. Such forward-looking statements are subject to known and unknown risks, uncertainties and other factors which may result in a substantial divergence between the actual results, financial situation, development or performance of Molecular Partners AG and investments and those explicitly or implicitly presumed in these statements. There are a number of factors that could cause actual results and developments to differ materially from those expressed or implied by these statements and forecasts. Past performance of Molecular Partners AG cannot be relied on as a guide to future performance. Forward-looking statements speak only as of the date of this presentation and Molecular Partners AG, its directors, officers, employees, agents, counsel and advisers expressly disclaim any obligations or undertaking to release any update of, or revisions to, any forward looking statements in this presentation. No statement in this document or any related materials or given at this presentation is intended as a profit forecast or a profit estimate and no statement in this document or any related materials or given at this presentation should be interpreted to mean that earnings per share for the current or future financial periods would necessarily match or exceed historical published earnings per share. As a result, you are cautioned not to place any undue reliance on such forward-looking statements.

Unless stated otherwise the information provided in this presentation are based on company information. This presentation is intended to provide a general overview of Molecular Partners AG’s business and does not purport to deal with all aspects and details regarding Molecular Partners AG. Accordingly, neither Molecular Partners AG nor any of its directors, officers, employees, agents, counsel or advisers nor any other person makes any representation or warranty, express or implied, as to, and accordingly no reliance should be placed on, the accuracy or completeness of the information contained in the presentation or of the views given or implied. Neither Molecular Partners AG nor any of its directors, officers, employees, agents, counsel or advisers nor any other person shall have any liability whatsoever for any errors or omissions or any loss howsoever arising, directly or indirectly, from any use of this information or its contents or otherwise arising in connection therewith.

The material contained in this presentation reflects current legislation and the business and financial affairs of Molecular Partners AG which are subject to change and audit.

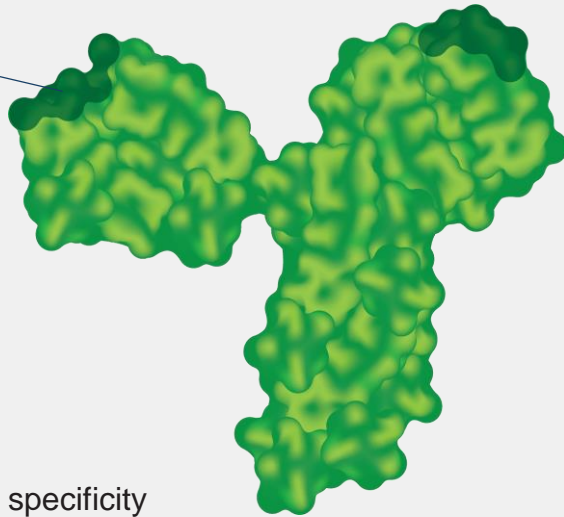
Pioneering DARPin® Therapies to Transform Lives



What are DARPin® Proteins

MONOCLONAL ANTIBODIES

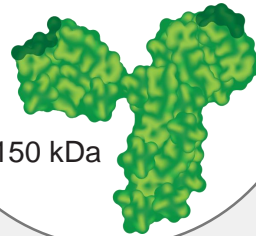
Binding regions / specificities



15 kDa



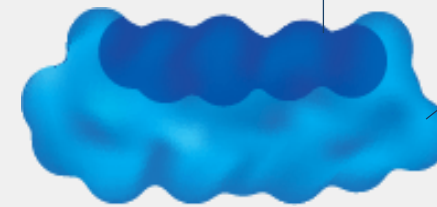
150 kDa



- High affinity and specificity
- Large size: 150 kDa
- Complex architecture; 4 proteins with 12 domains
- Long half-life
- Mammalian expression
- Good safety & low immunogenic potential

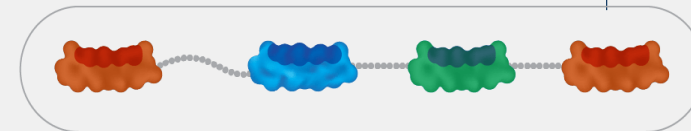
MONO-DARPin PROTEINS

Binding region / specificity



DARPin module

Multi-specific DARPin Product Candidate



- High affinity and specificity
- Small size: 15 kDa (1/10 of a monoclonal antibody)
- Simple architecture 1 protein with 1 domain
- Tunable half-life
- High-yield microbial expression; High stability
- Good safety & low immunogenic potential

Pioneering DARPin[®] Solutions: Right Team, Right Time

Proven Team

- Track-record to deliver a Phase 3 ready candidate in 12 months from idea generation
- Strong mix of founders and key new hires
- Increased cash on balance sheet by \$160m in 2020 (Funded into 2023)

Turn-key Multispecifics DARPin[®] Platform

- Fast & differentiated candidates:
 - First & only multi-specific COVID drug in clinical development (ensovibep)
 - AMG 506/MP0310: smart localized immune agonist
 - AML: solving the problem of bi-specifics in AML

Key Value Drivers Ahead

- Ensovibep: Registrational studies in outpatient setting & hospitalized setting (ACTIV-3)
- Additional AMG 506/MP0310 data, MP0317 FIH in H2 2021
- AML Candidate FIH in 2022
- Abicipar decision

We Are Ready to invest in our exponential growth; to advance a burgeoning pipeline; to continue growing our team; following a clear strategy

Executive Management and Senior Leadership Team

EXECUTIVE MANAGEMENT



Patrick Amstutz, PhD, CEO

- Co-founder, former CBO & COO
- **Member of the Board of Directors**
- PhD in biochemistry from UZH



Dr. Nicolas Leupin, CMO

- Proven track record in drug development
- Former CMO argenx, senior positions at Celgene



Michael Stumpp, PhD, COO

- Co-founder, previously CSO
- PhD in biochemistry from UZH



Andreas Emmenegger, CFO

- Former CFO Glycart, Finance Roles at Roche
- >20 years experience as CFO of private & listed companies and in fund raising, IPOs

Senior Leadership Team



Ana Cerdeira, VP Partnering & Strategy

- Former VP Emerging Markets Portfolio Mgmt. at Takeda



Julien Gander, General Counsel

- Director Legal & Group Risk Mgmt and Senior Legal Counsel at Lonza



Seth Lewis, SVP IR, Comms, Strategy

- Head of IR and Comms at Surface Oncology, Bavarian Nordic A/S, 9 years at Trout Group
- Based in Boston office



Daniel Steiner, SVP Head of Research

- Previously responsible for DARPin® generation, PK extension, enabling work for DARPin selection
- PhD, Univ. of Zurich, Plückthun lab

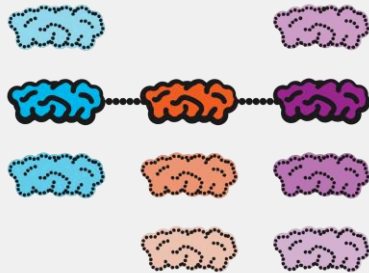


Alex Zuercher, SVP Development

- Previously VP of Operations & Dir. of CMC at MP
- Cytos Biotechnology and Spirig Pharma

Innate Advantages Combined With Proprietary Approaches

DARPin® Differentiation: Turn-key multi-specifics



- Small size with single-domain activity
- Up to 6 binders in one candidate
- Open combinatorial space (test 10,000)
- No loss of stability
- Simple, cost-effective manufacturing

Nature's choice for multi-specifics

DARPin® Benefit Solving clinically relevant problems



Localized Activity

- Local and temporal control of activity



Molecular Handcuff

- Full shut-down by conformational freeze



Prevent escape

- Prevent escape





Candidates Unlock & Expand

- MP0310
- MP0317
- Next-Gen CD3

- MP0274
- MP0423

- MP0250
- Ensovibep
- MP0423

Pipeline

CANDIDATE / FOCUS	PRECLINICAL	PHASE 1	PHASE 2	PHASE 3	RIGHTS
Ensovibep (MP0420) / COVID-19					
MP0423 / COVID-19					
AMG 506 (MP0310) / FAP x 4-1BB					
MP0317 / FAP x CD-40					
AML CD3 x CD33 x CD70 x CD123					
Abicipar / Neovascular AMD*					
Abicipar / DME					

■ Infectious disease
 ■ Oncology
 ■ Ophthalmology

Synergistic Partnerships Built on a Versatile Drug Platform

Ophthalmology

Therapeutic Area Deal

- Partnership for abicipar, two positive Phase 3 studies
- Received \$150m to date; \$360m in potential milestones and teens royalty still possible
- CRL (June 2020): AbbVie evaluating next steps with agency



Oncology

Product Combination Deal

- Partnership with Amgen to combine AMG 506 / MP0310 with BiTE[®] molecules
- Phase 1 conducted by MP and Amgen to develop for combination studies
- ~\$500m in milestones and mid teen royalties



Virology

Capability Deal

- Leverage production, global development and distribution of Sandoz Novartis for ensovibep
- Received CHF 60 m to date; CHF 150m milestone payment upon option exercise to license
- 22% royalty on sales in commercial countries



Over ~\$1B in potential milestone across several programs

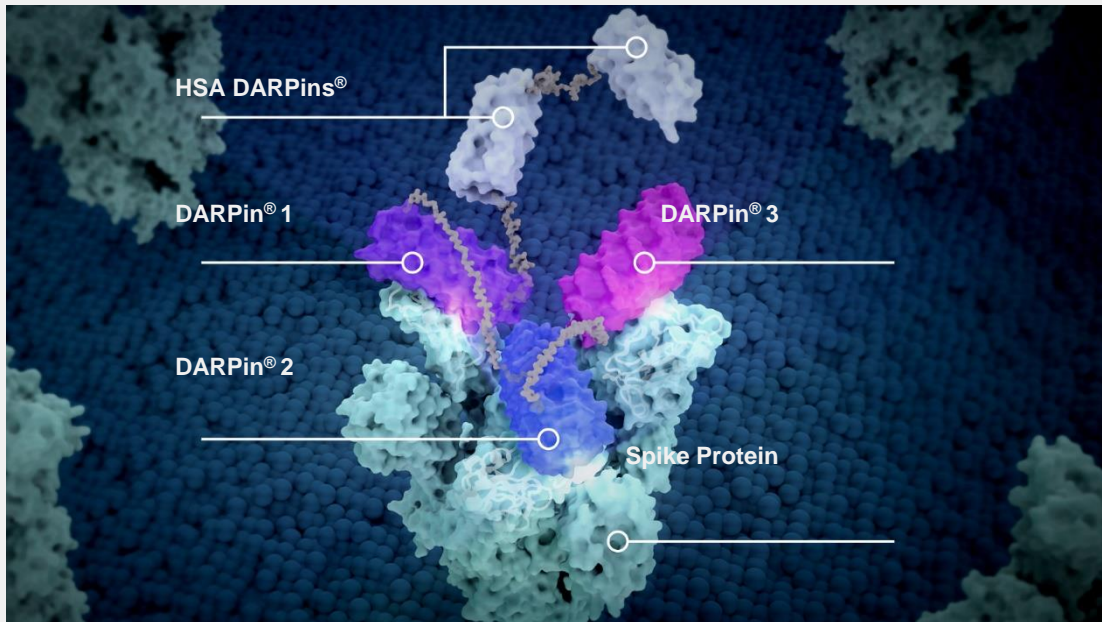


COVID-19 Program Success Opens Path for Antiviral Portfolio

Our COVID-19 Program: Two Outstanding Candidates

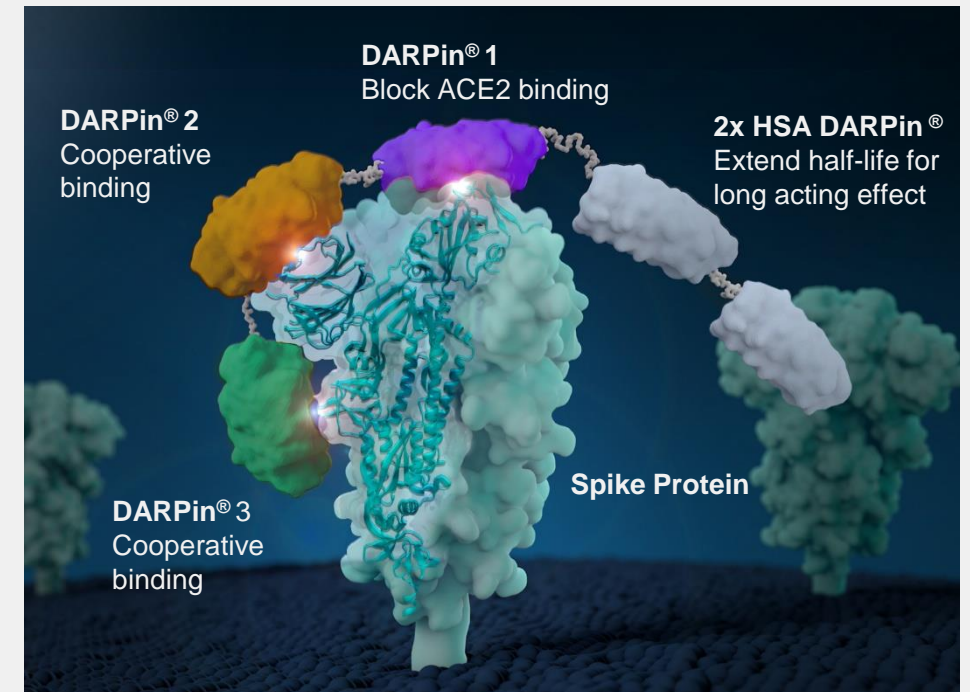
Ensovibep (MP0420)– best-in-class

- Tri-specific DARPin® antiviral targeting the RBD for highest potency & to prevent viral escape
- Long half-life (HSA DARPins) – single injection
- Low costs and high numbers of doses available
- Potential for bolus / s.c. injection – simple application



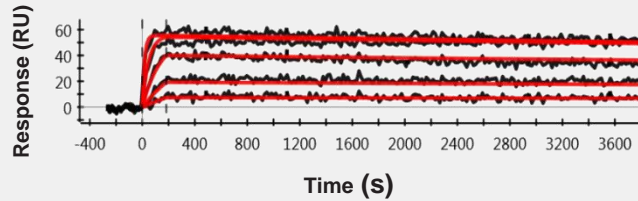
MP0423 – first-in-class

- 3 DARPins blocking different domains of the viral spike
- High activity even if RBD mutates heavily and escapes all vaccines and therapeutic antibodies
- All other benefits of ensovibep

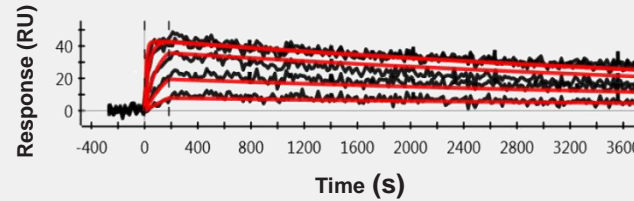


Cooperative Target Engagement Leads To Super Affinity

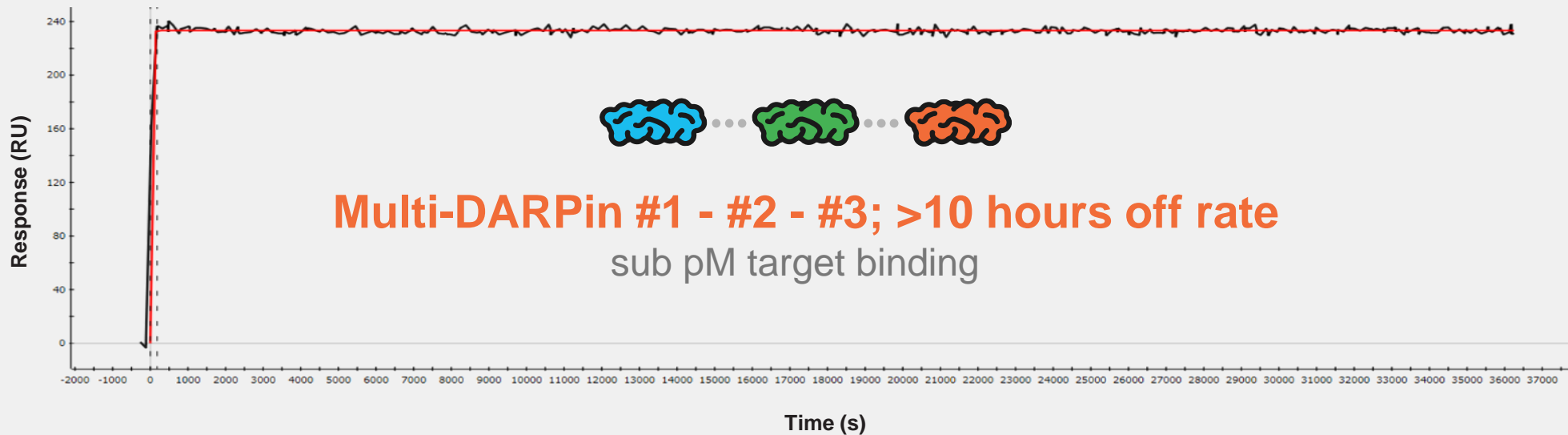
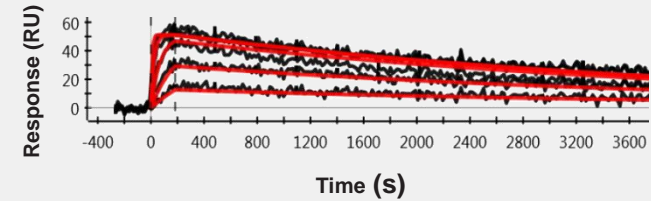
DARPin #1; 1 hour off-rate



DARPin #2; 1 hour off-rate

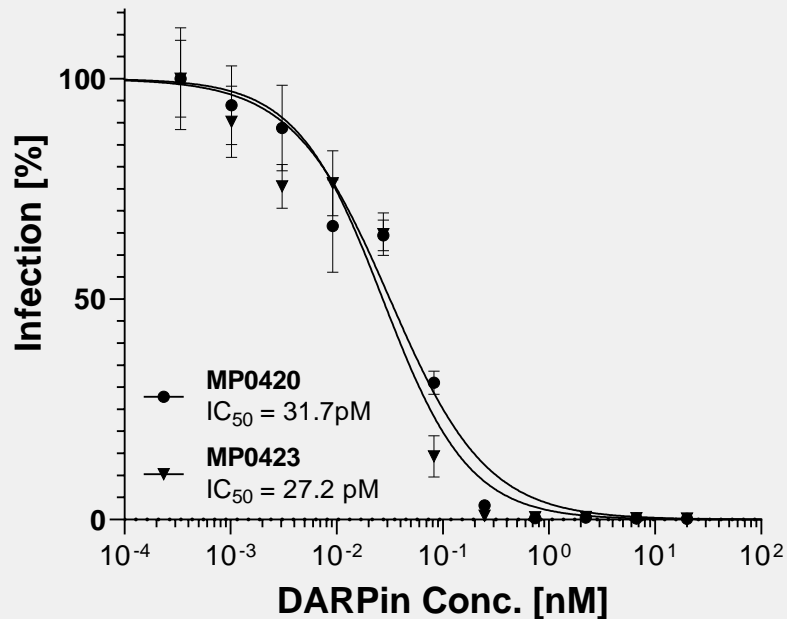


DARPin #3; 1 hour off-rate



High Potency Inhibition Translates To *In Vivo* Prophylactic And Therapeutic Properties

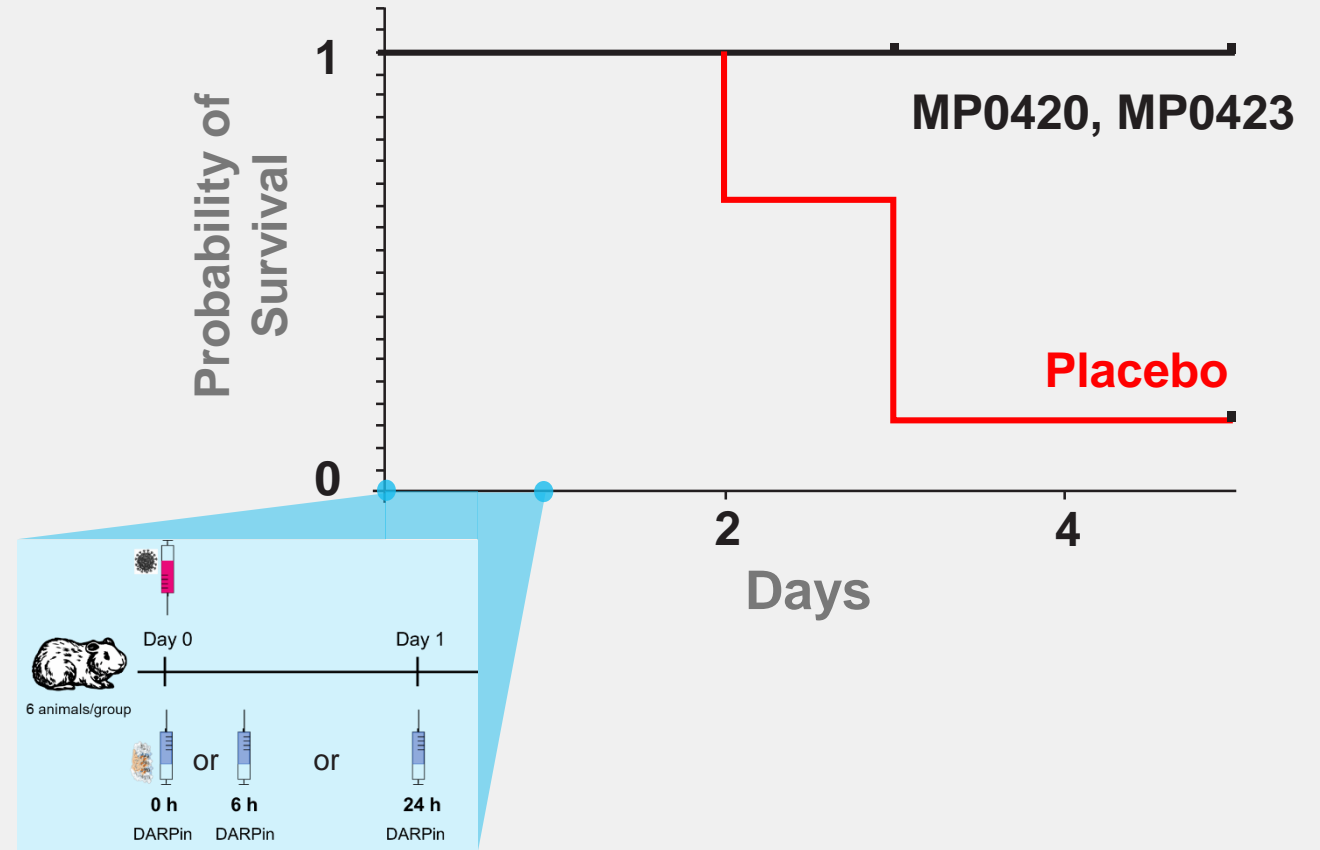
In vitro activity: Pseudotype Neutralization Assay



Highest potency

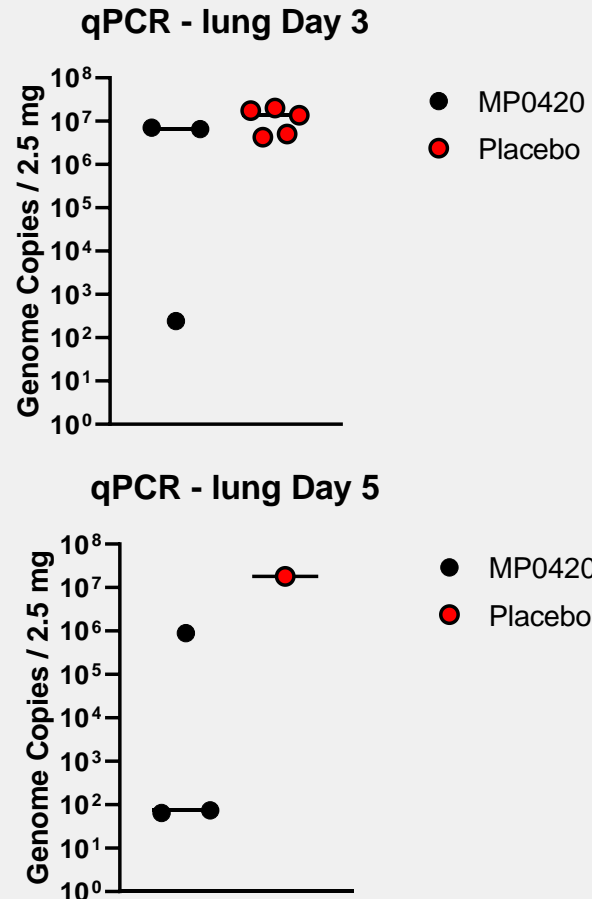
Tri-binding leads potency in the low pM range; likely at the assay limit

In vivo activity: Kaplan Meier Plot - Hamster Model (6 animals/group)

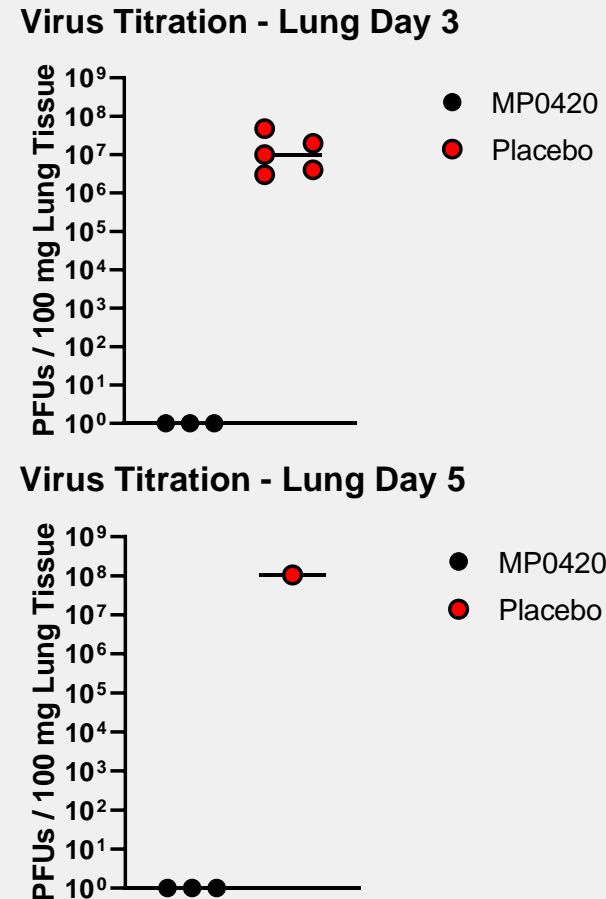


Ensovibep Blocks the Virus and Prevents Infection in the Lung

Viral titer in the lung



Viral infectivity in the lung



Ensovibep blocks viral infectivity completely

New SARS-CoV-2 Variant Analysis – Ensovibep May 2021

Variants	Combined mutations	Neutralization Potency IC50 [ng/mL]
wild type	(Wuhan)	1.0
B.1.1.7 / United Kingdom	69-70 del, del145, E484K, N501Y, A570D, D614G, P681H, T716I, S982A, D1118H	3.2
	69-70 del, del145, S494P, N501Y, A570D, D614G, P681H, T716I, S982A, D1118H	0.8
B.1.351 / South Africa	L18F, D80A, D215G, Del242-244, R246I, K417N, E484K, N501Y, D614G, A701V	5.0
P.1 / Brazil	L18F, T20N, P26S, D138Y, R190S, K417T, E484K, N501Y, D614G, H655Y, T1027I, V1176F	1.2
B.1.429 / California (US)	S13I, P26S, W152C, L452R, D614G	0.5
B.1.526 / New York (US)	L5F, T95I, D253G, E484K, D614G, A701V	3.0
Emerging Variants:		
R.1	W152L, E484K, D624G, G769V	2.4
A.23.1	F157L, V367F, Q613H, D614G, P681R	0.3
Individual Key Mutations of Variants:		
B.1.617 / India	E484Q	2.3
	L452R	0.5
	D614G	2.4
	G142D, P681R, Q1071H	n.a.
B.1.618 / India	del145	2.1
	del146	n.a.
	E484K	2.7
	D614G	2.4

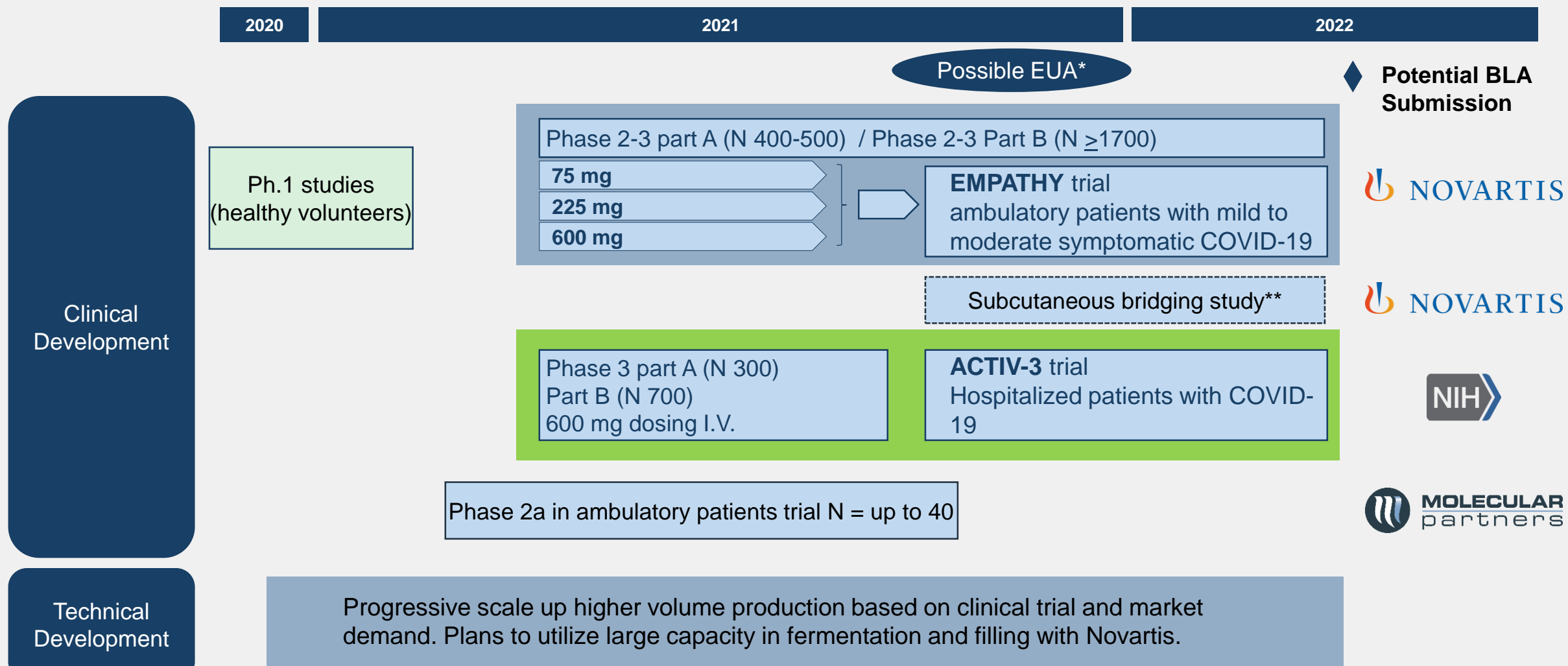
**No liabilities
detected to
date on any
of the global
variants of
concern**

Pseudotype VSV or lentivirus SARS-CoV-2 neutralization assay

Novartis Deal Terms

- **CHF 210m in upfront and near term potential milestones**
 - CHF 60m upfront
 - CHF 20m as a cash payment
 - CHF 40m in MOLN shares
 - CHF 150m milestone payment upon option exercise to license
- **22% royalty on sales in commercial countries**
 - Molecular Partners has agreed to forgo royalties in lower income countries, and is aligned with Novartis' plans to ensure affordability based on countries' needs and capabilities.
- **Clinical Development:**
 - Novartis pays for all clinical development of ensovibep and MP0423, beyond phase 1

Draft Development plan for MP0420



* Emergency Use Authorization submission, pending interim analysis of data is supportive of EUA

** S.C doses based on active dose in EMPATHY

Ensovibep (MP0420) Phase 1

- Study initiated November 2020, all three cohorts fully enrolled
- Double-blind, placebo controlled trial exploring safety and pharmacokinetics
 - IV administration
 - Up to 24 subjects total, stratified 3:1 (active: placebo)
 - Ages 18-65
- Dose range covers clinical doses in upcoming trials
- Endpoints: safety, tolerability and pharmacokinetics (SAD)
- Status: 1st and 2nd cohort completed; 3rd cohort ongoing

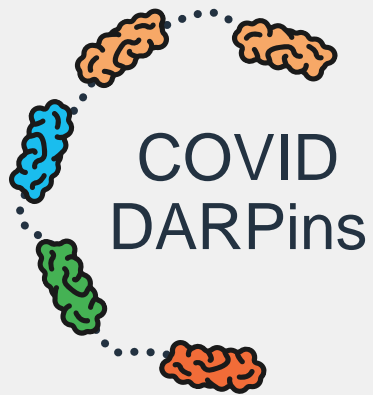
Initial findings show ensovibep to be safe and well tolerated with no significant adverse events. Predictable exposure seen post administration, confirming the expected half-life of 2-3 weeks

Ensovibep Upcoming Milestones

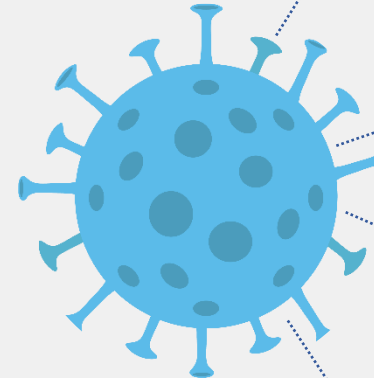
- Final data from phase 1
- Open label 2a initiation
 - 2a results mid 2021
- Additional variant data
- Initiate ACTIV-3 (NIH sponsored)
 - Hospitalized patients (Up to 1,000)
 - Futility analysis following 300 patient data

- Initiate EMPATHY (Novartis / MP)
 - Part A results (N=400-500)
 - Part B initiate (N≥1,700)
 - Potential EUA in 2021
- Potential S.C. bridging trials (Novartis / MP)
 - Initiate once dosing for EMPATHY part B is established

DARPin[®] Opportunities in Virology



- **Multi-valency** for superior potency
- **Multi-specificity** for mutation resistance
- **Speed of candidate generation**
- **High amount & low-cost production**
- **High stability and solubility** for simple administration and distribution



Respiratory
Viruses

- RSV, influenza and others
- Benefits as per COVID DARPin[®]

Pandemic
readiness

- Corona, influenza
- Early intervention to prevent spread

Viral
reservoirs

- HIV, HBV, HCV
- Targeting pMHC

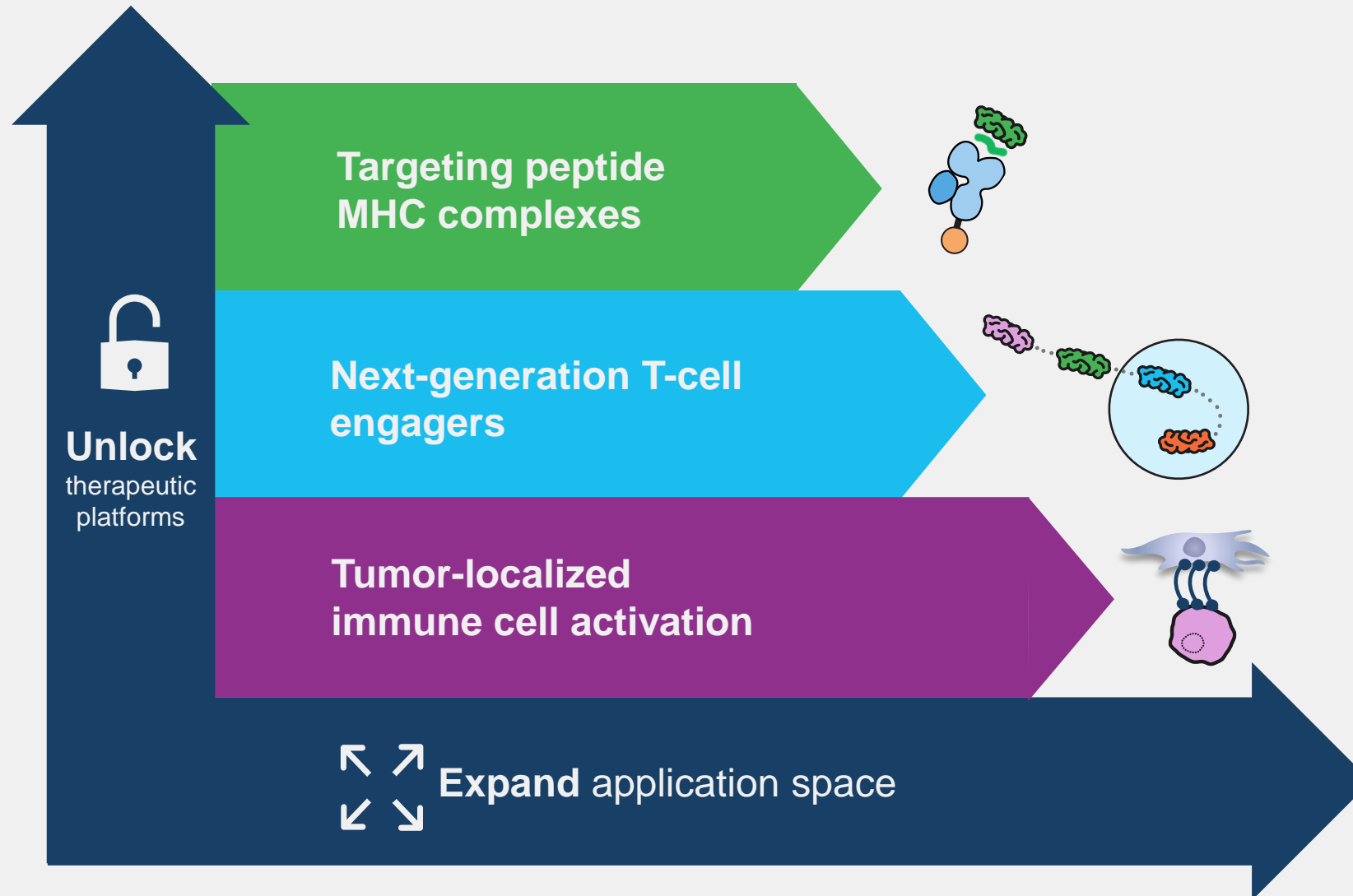
Low-income
country
viruses

- Example: dengue
- High stability
- Low costs



Clinical Programs: Expanded

Unlock and Expand: Therapeutic Modalities



Recent data at AACR Highlight Platform Potential

MP0317 (targeting CD40 and FAP)

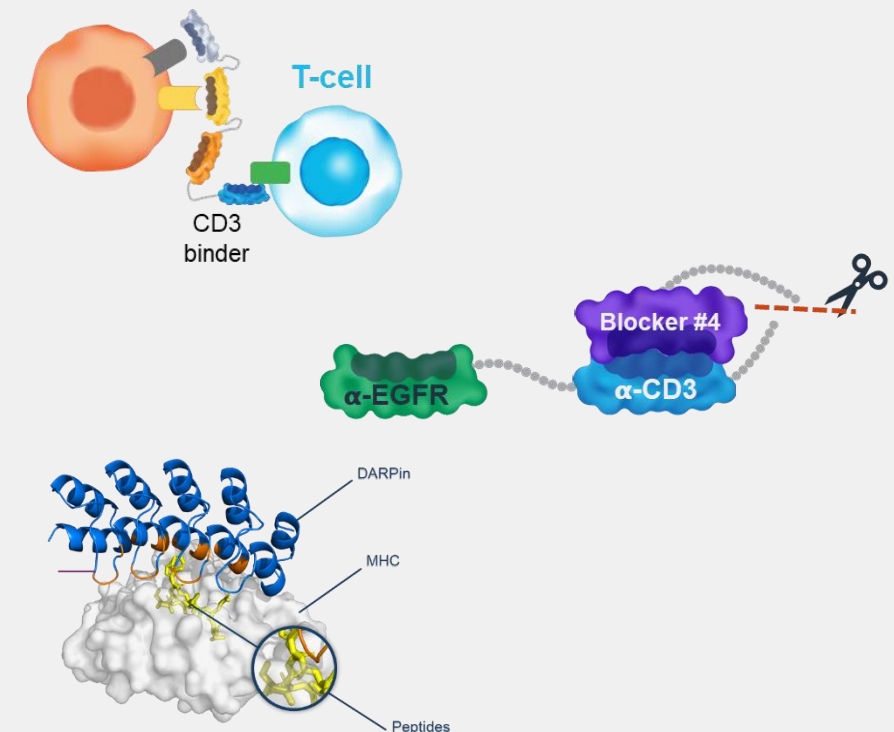
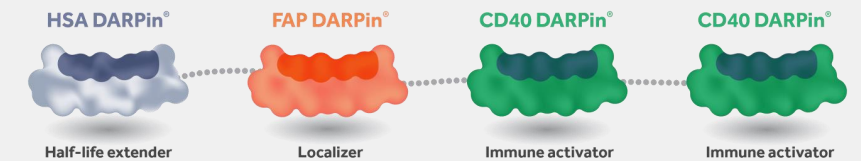
- MP0317, a FAPxCD40 targeting multi-specific DARPin® therapeutic, drives immune activation and leads to macrophage repolarization in vitro and ex vivo

T-cell engager programs

- Novel multi-specific DARPin® T-cell engager with an improved therapeutic window to overcome dose limiting toxicities in AML therapies.
- A solution to T-cell engager toxicity: An anti-CD3 Prodrug DARPin® (CD3-PDD) shows no toxicity, but potent anti-tumor activity in a humanized mouse model

Peptide-MHC program

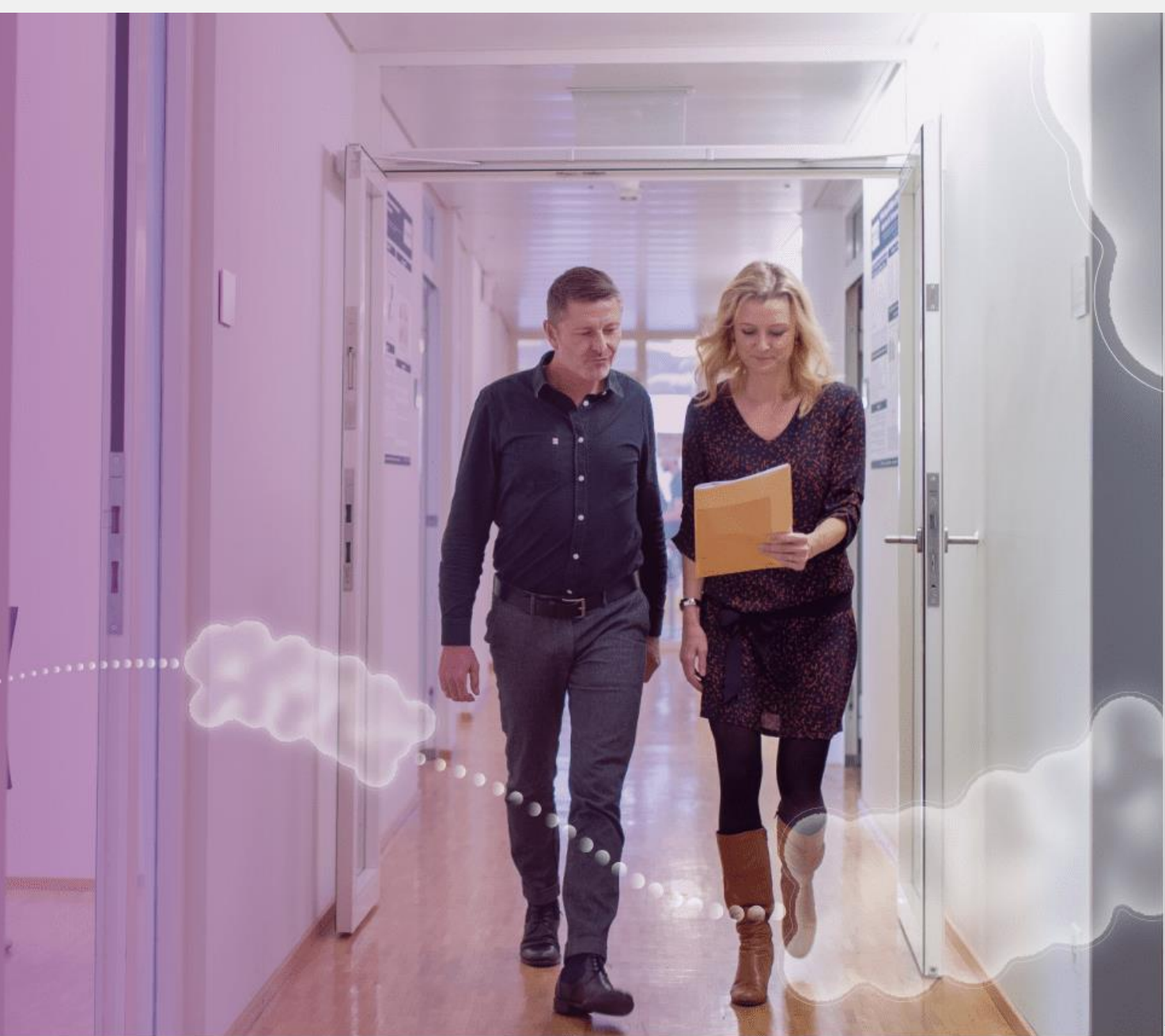
- Application of the DARPin® technology for specific targeting of tumor-associated MHC class I: peptide complexes





Localized Immune Activators

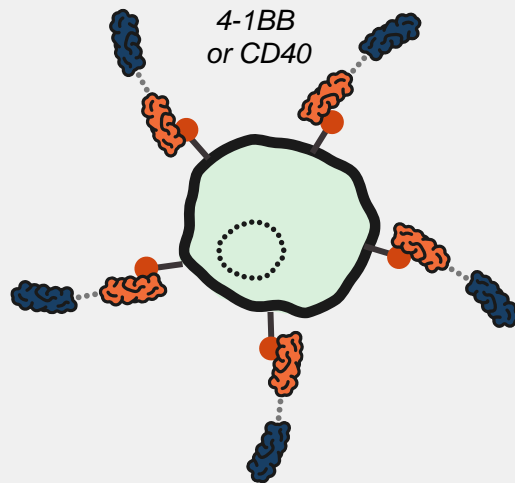
AMG 506 (MP0310) &
MP0317



Local Activation of Immune cells: Fibroblast Activation Protein (FAP) as a General Switch

BODY

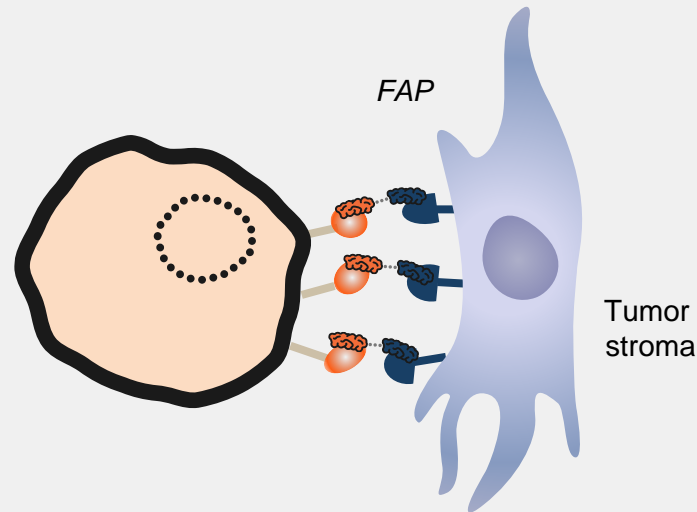
- In normal tissues, receptor is broadly distributed
- Immune cell remains inactive



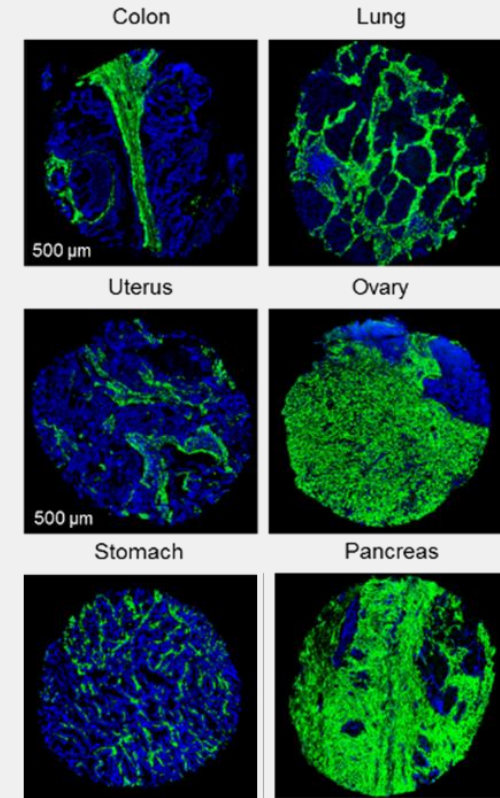
VS

TUMOR

- High FAP concentration near tumor clusters receptors
- Immune cell is activated

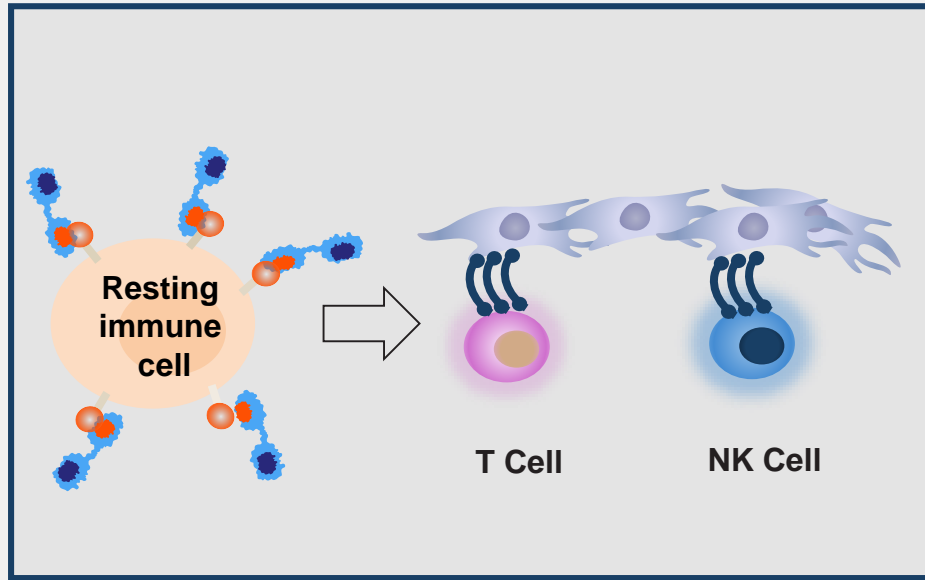


- No activation by mono-binding of FAP or CD40/4-1BB
- Simultaneous binding leads to tumor-local immune activation



Human FAP, DAPI

AMG 506/MP0310: Localized Activation of 4-1BB

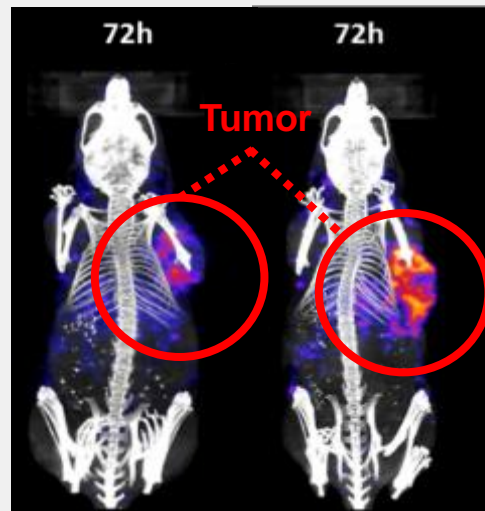


- Good safety profile without major systemic toxicity
 - No liver toxicity or systemic activation of immune cells
 - IRRs frequent but manageable
- MP0310 is observed in tumor tissue
- Tumor biopsies show tumor-localized immune response consistent with the MoA
- Next step: investigate appropriate dosing schedule for sustained activity
- \$50m upfront, ~\$500m in milestones plus royalties

Combination of AMG 506 / MP0310 and TAA x CD3 Bi-Specific Results in Significant Increase of Intratumoral CD8+ T Cells

FAP-Mediated Tumor Accumulation of AMG 506

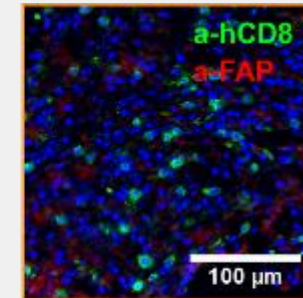
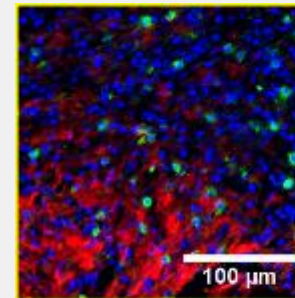
HT-29-T-implanted NSG mice



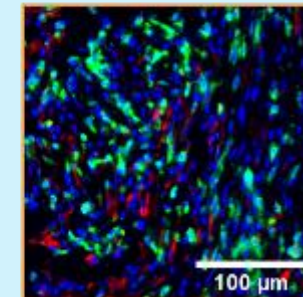
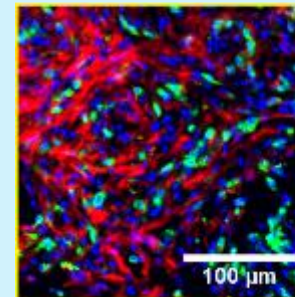
no-FAP x 4-1BB mFAP x 4-1BB

Intratumoral CD8 T cells

TAA x CD3



TAA x CD3
+
mFAP x 4-1BB

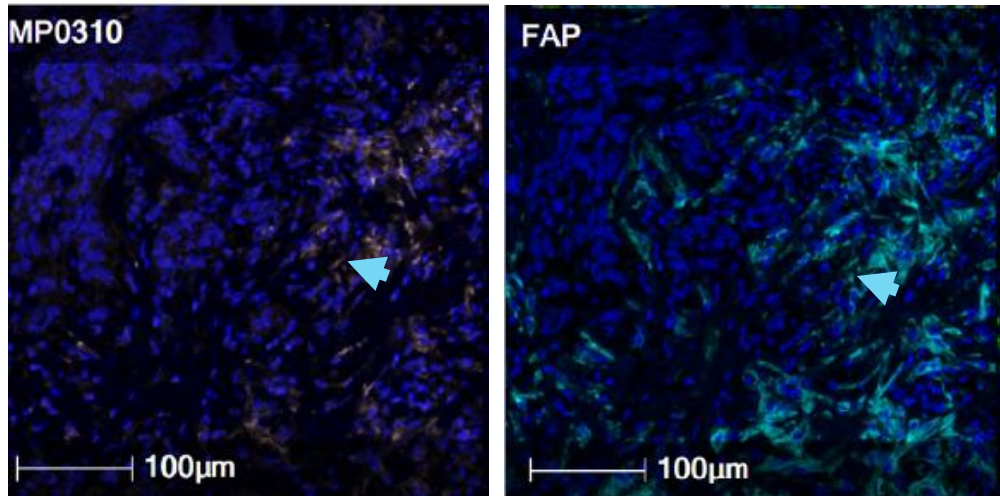


+ AMG 506

AMG 506 / MP0310 Accumulates in Tumor Tissue in Dose Dependent Manner

MP0310 low dose colocalizes with FAP

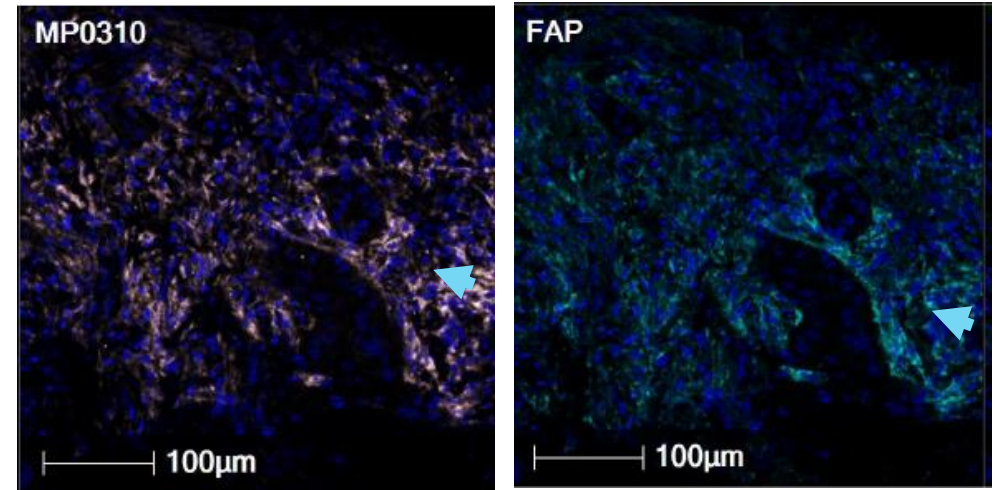
MP0310 < FAP



Endometrial carcinoma (Liver metastasis), C1D15

MP0310 high dose saturates FAP

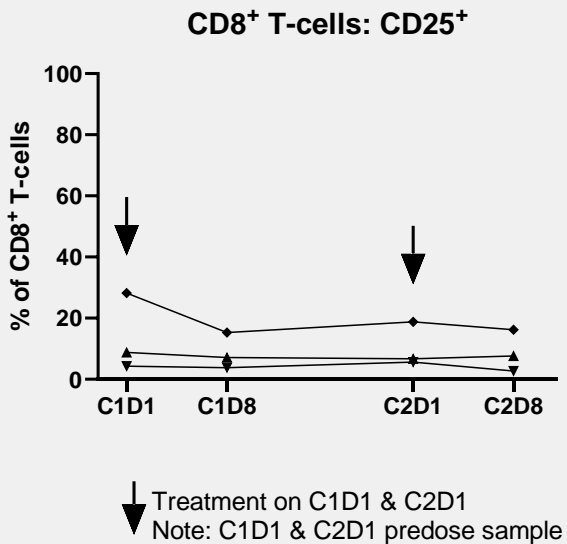
MP0310 > FAP



NSCLC (lung), C1D15

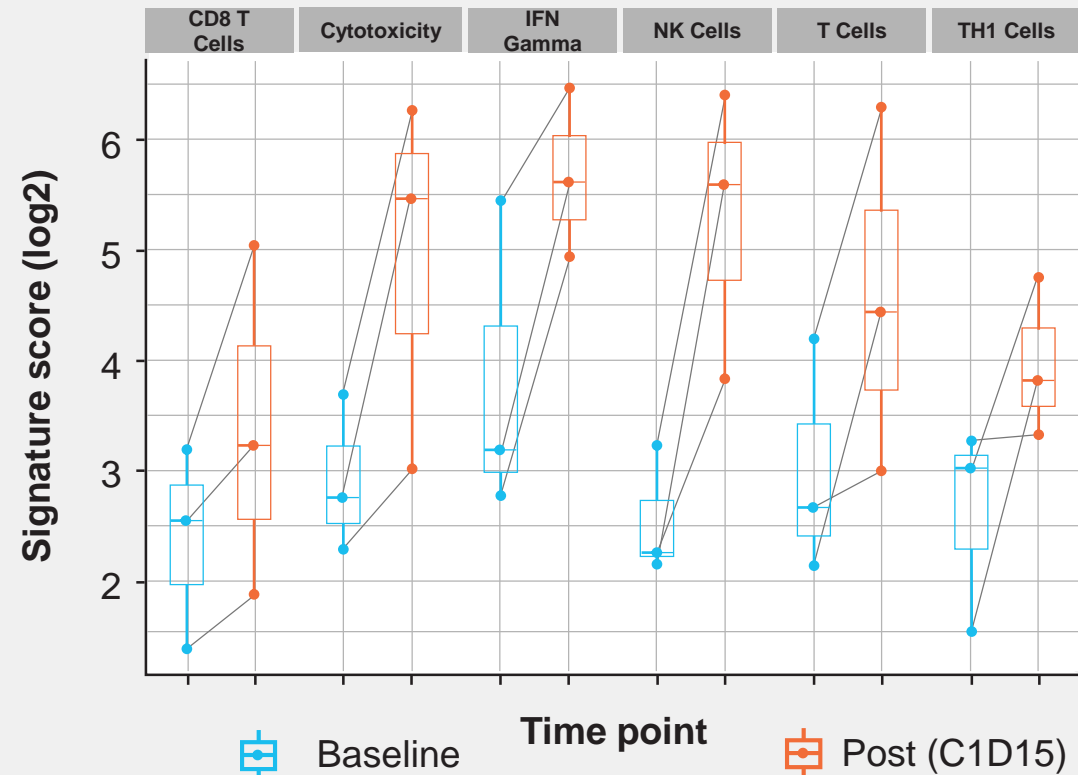
PD Activity in Paired Biopsies Supports AMG 506 / MP0310 MoA on 4-1BB Activation

BLOOD



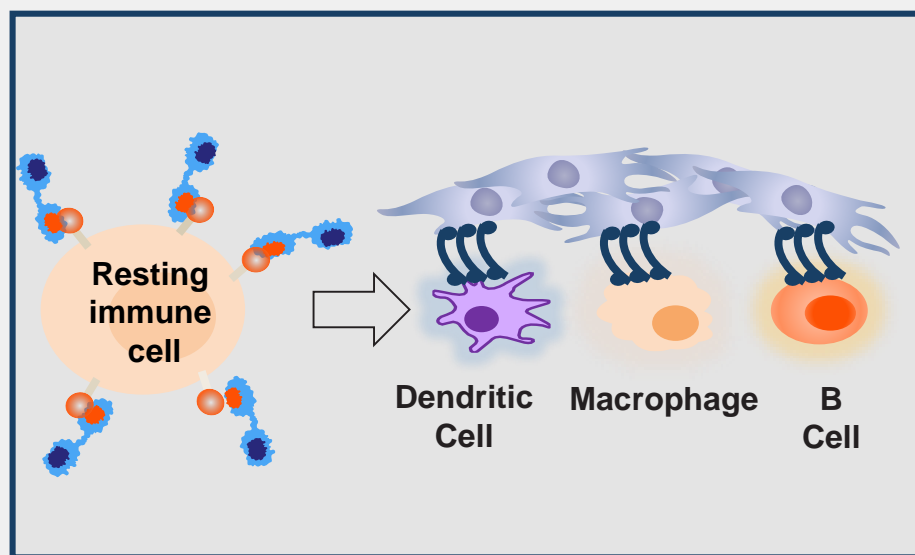
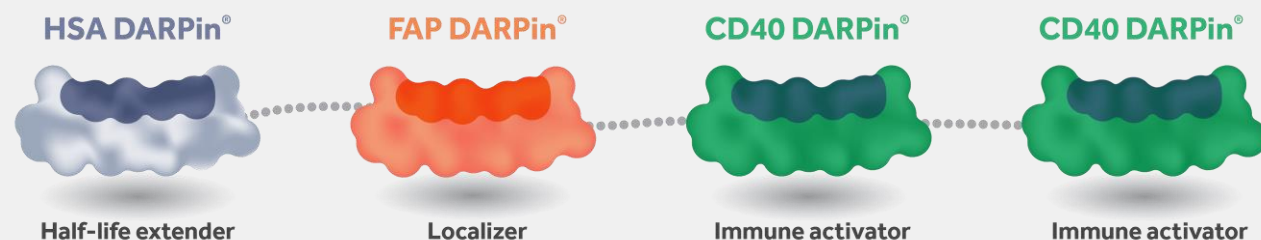
- In the blood, immune cells remain inactive (CD8⁺ & CD4⁺ T-cells, Treg, NKT, B-cells, NK)

TUMOR



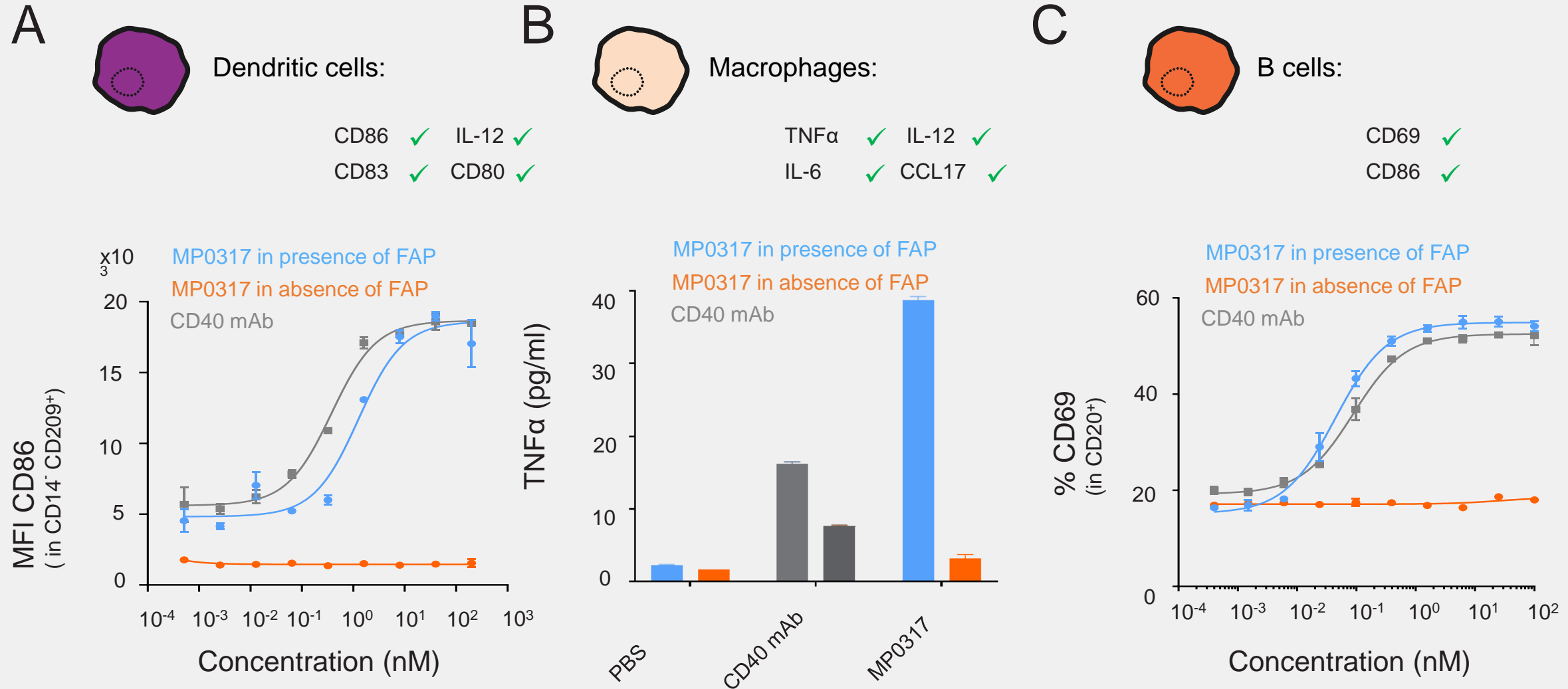
- In the tumor, T-cells and NK cells are activated

MP0317: Localized Activation of CD40



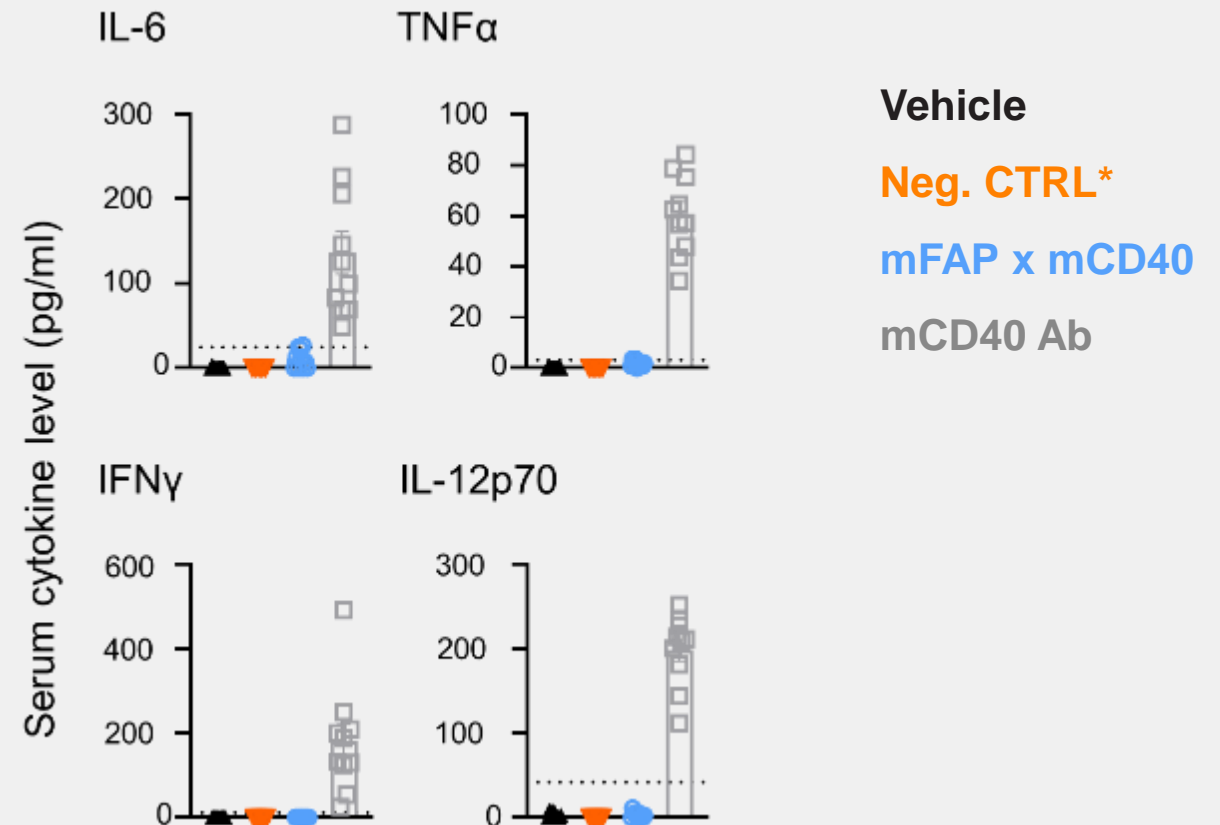
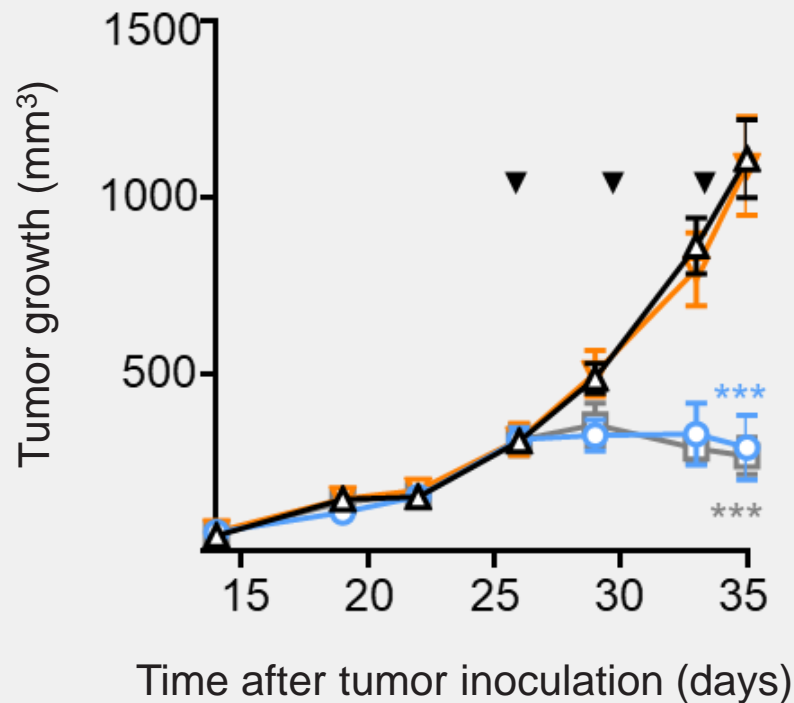
- Highly promising target with potential to significantly impact clinical outcomes for patients
- Complex biology to manage and administer safely and efficaciously
- FAP localization translating well, and will provide insights into dosing strategies
- First patient in H2 2021
- Clinic design will include early potential for expansion based on activity
- Multiple avenues of combination treatments to explore: Chemo, PD-1, Radiation, etc.

MP0317: FAP-dependent Activation of Specific Immune Cells



MP0317 Shows Full Activity with No Detectable Side-effects

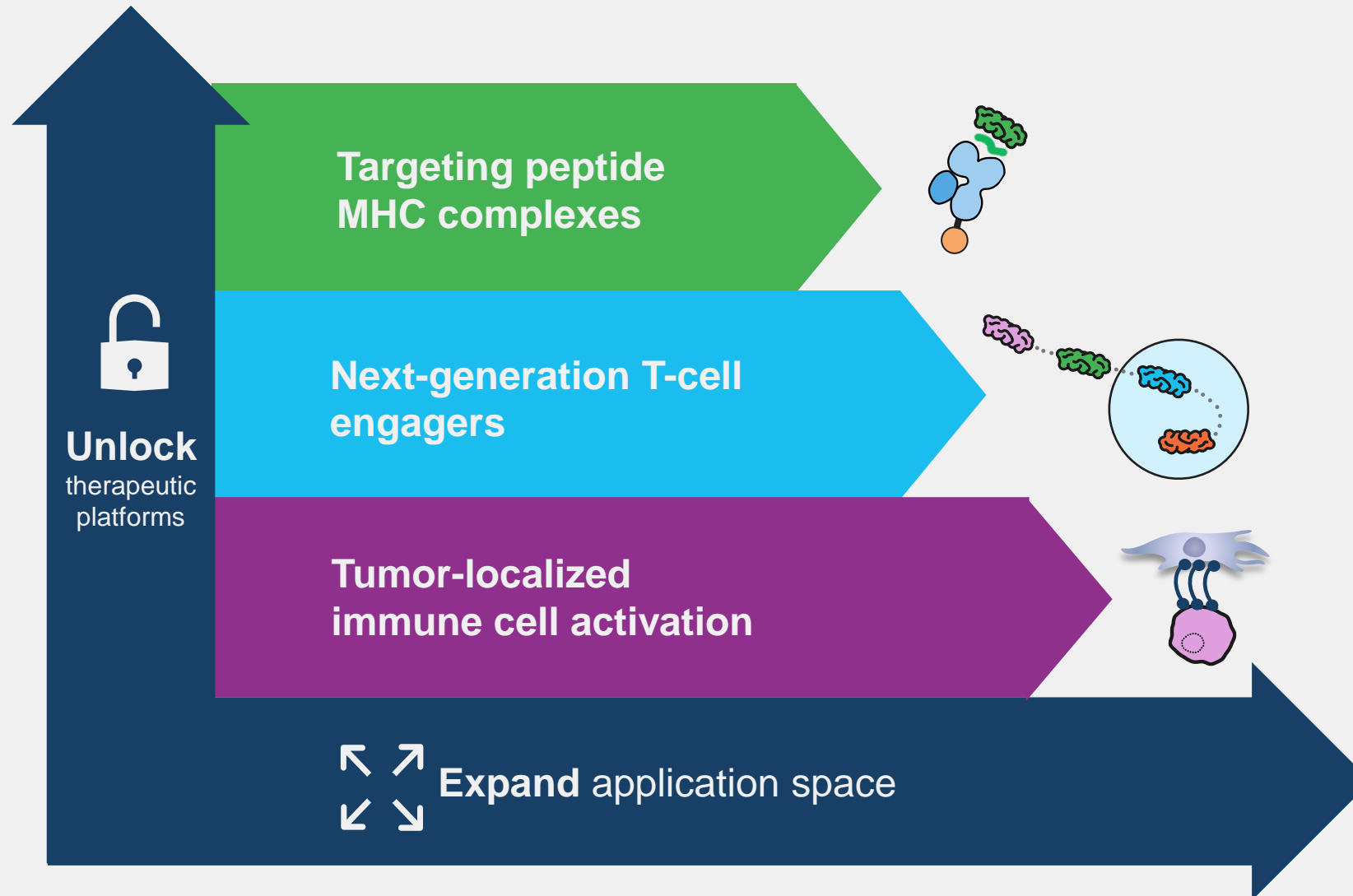
FAP^{HIGH} TUMOR: MC38-FAP Colorectal cancer





New Therapeutic Platforms: Unlocked

Unlock and Expand: Therapeutic Modalities



Current Limitations of CD3 Approaches

Safety

Hyperimmune-stimulation

Neurotoxicity

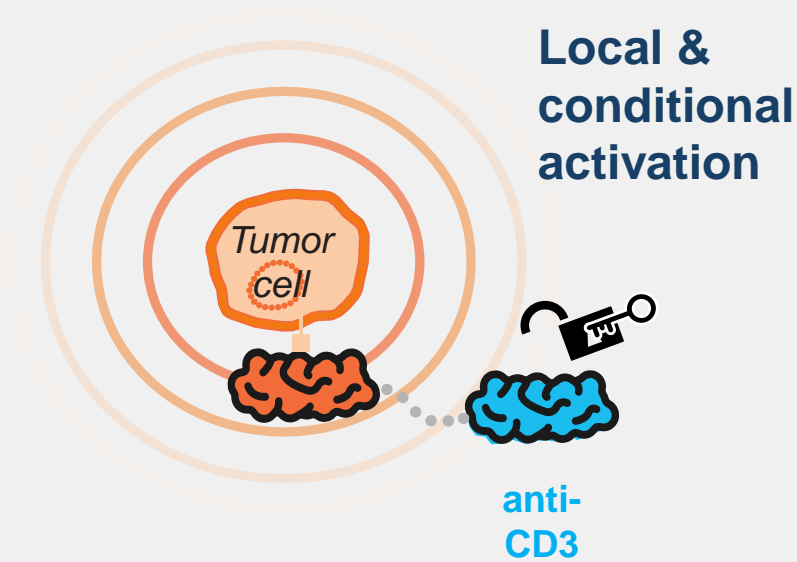
**Cytokine release syndrome
(CRS)**

Efficacy

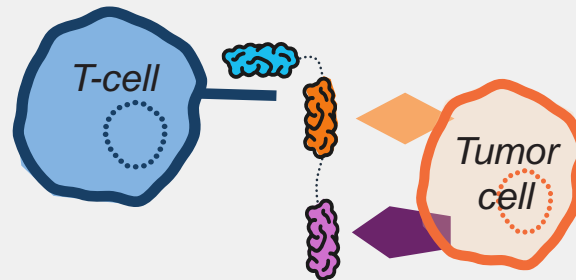
Tumor escape

Target engagement

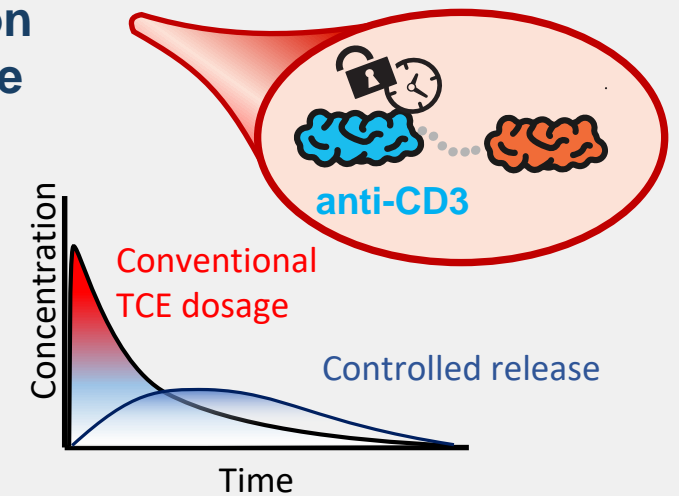
Our Solutions - Next Generation T-cell Engagers



Multi-specific T-cell engagers



Slow activation over time

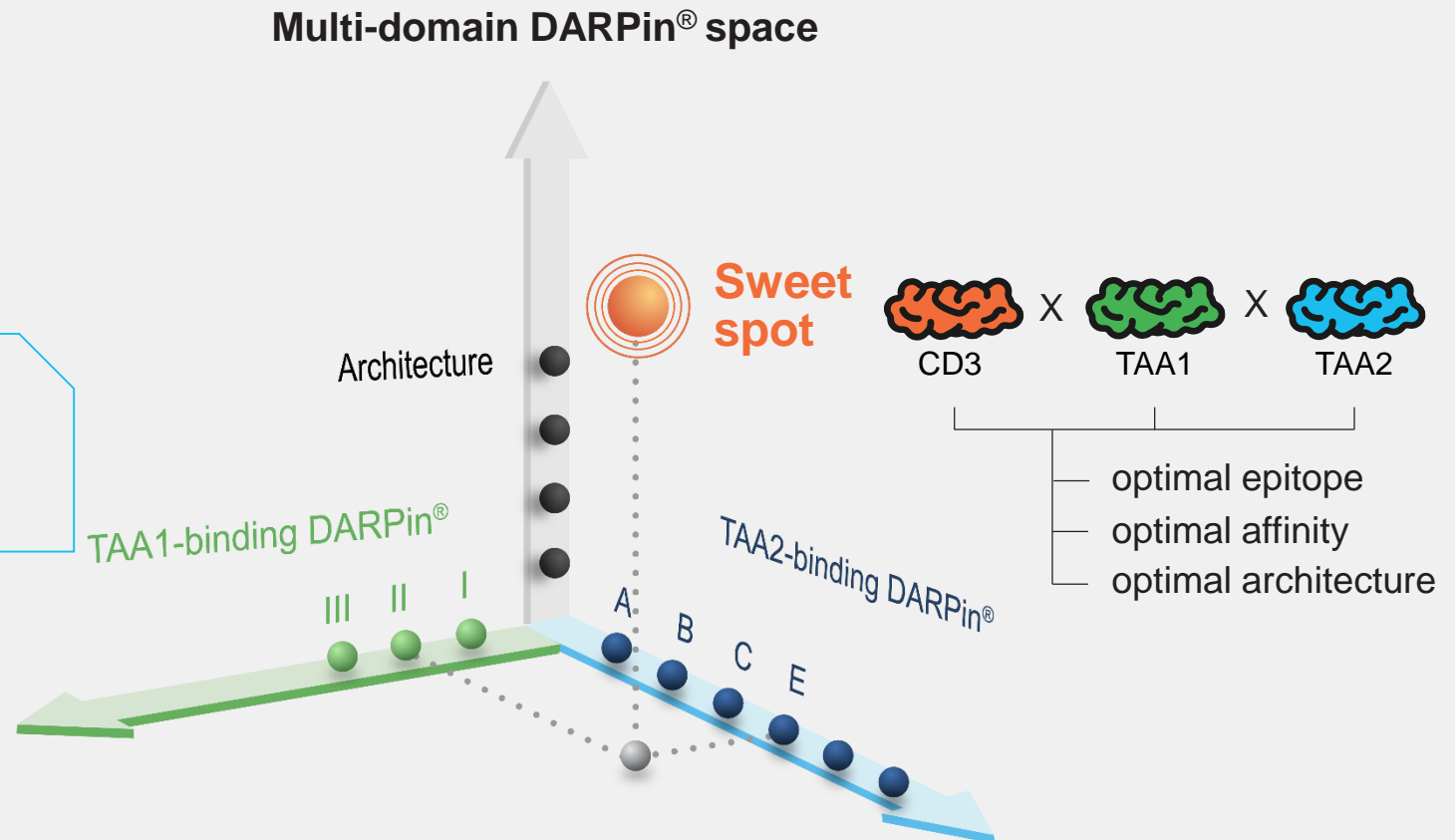
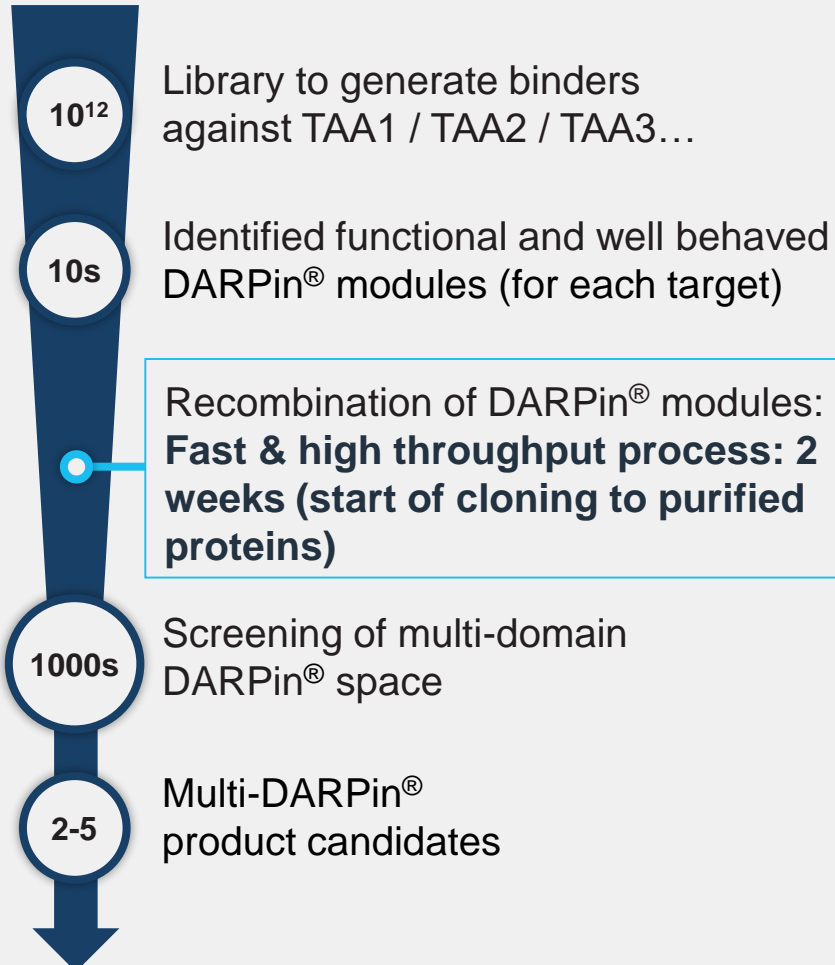


Improve safety to allow optimal dosing and
Deepen Efficacy for longer effect

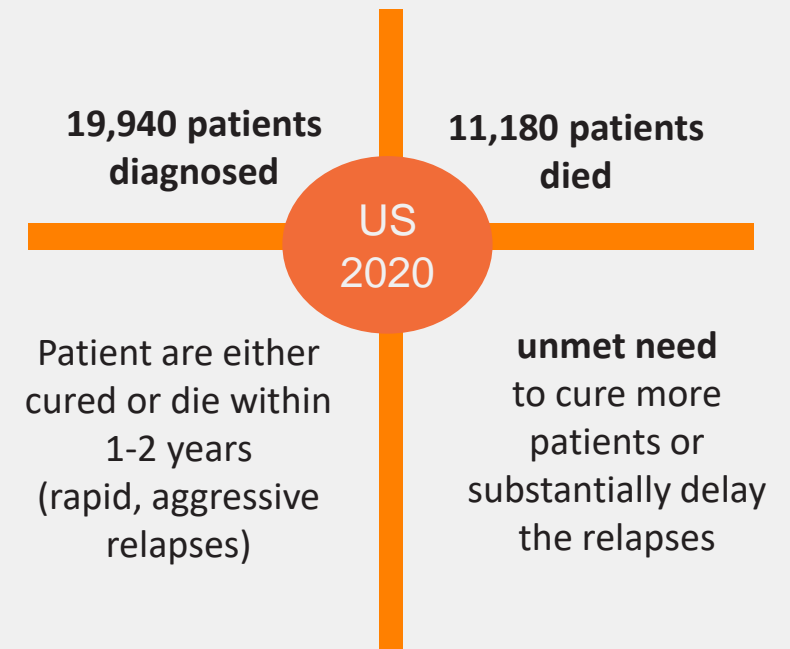
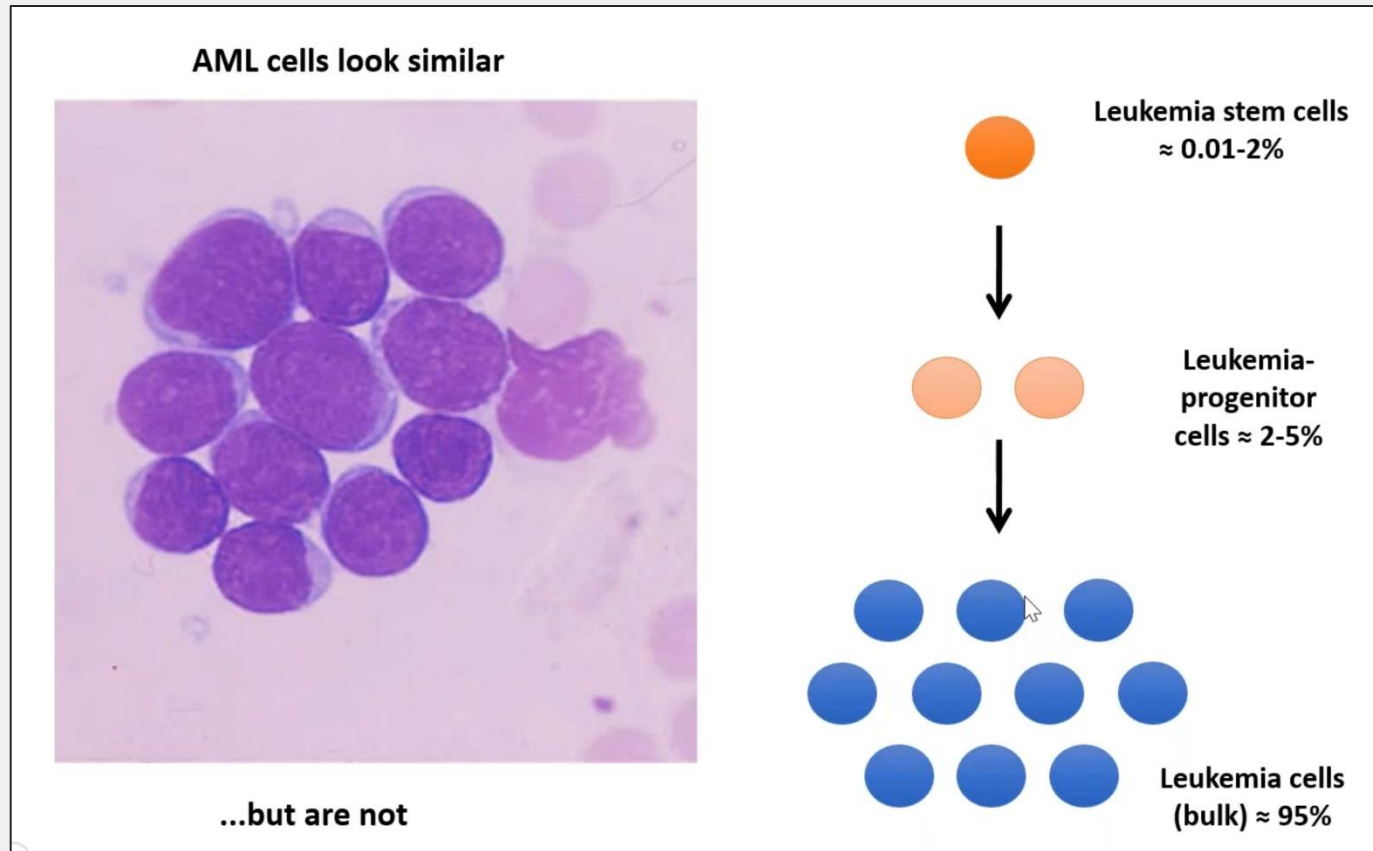
Update at AACR 2021

Multi-DARPin® Versatility Allows Screening for Function Sweet Spot

molecules



AML: Deadly Disease for About Half of the Patients



MRD+ is driver of relapse (only partial eradication of leukemic stem cells)
→ for curative intent LSCs need to be fully eradicated, while leaving HSCs untouched

As only in-vitro data available, value proposition derived in-vitro data and scientific concept

The DARPin® Solution: an avidity driven multi-specific DARPin® T-cell engager

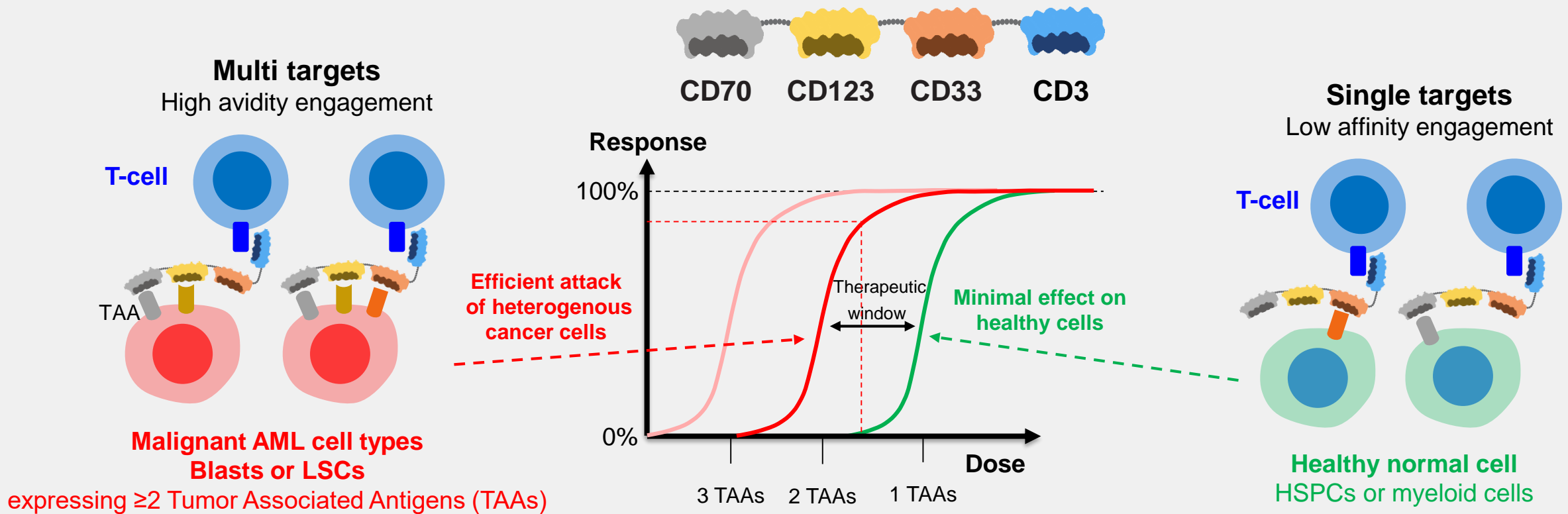


Figure 1. The concept of a multi-specific avidity driven DARPin® T-cell engager in AML

Optimizing the affinity of individual linked TAA binders utilises the avidity effect to deliver high affinity binding in the presence of ≥ 2 TAA targets on AML cell types e.g. blasts or leukemic stem cells (LSCs), but low affinity binding in the presence of single TAA presenting cell types e.g. hematopoietic stem and progenitor cells (HSPCs). This should reduce effects on off-target healthy cells, increasing the safety window, but still allow elimination of heterogenous malignant cells expressing 2 or 3 TAAs, thereby providing a novel AML treatment modality with an improved benefit/risk profile (middle graph).

DARPin® solution

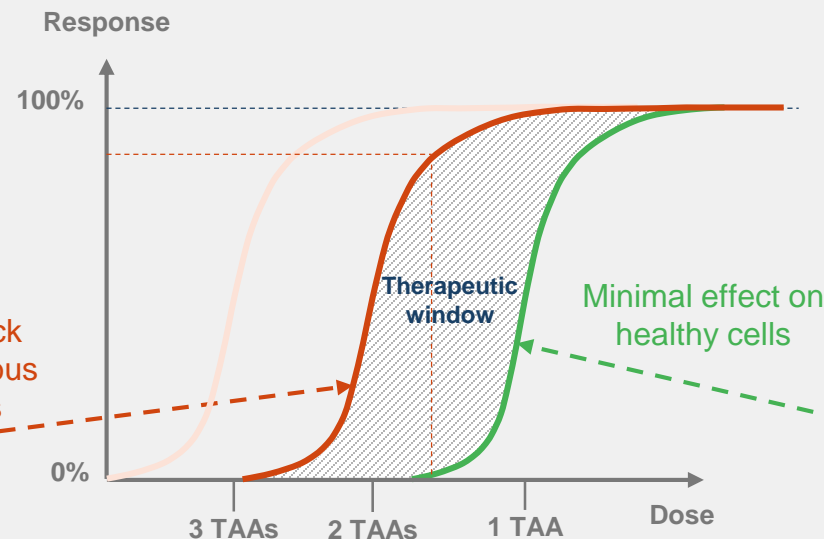
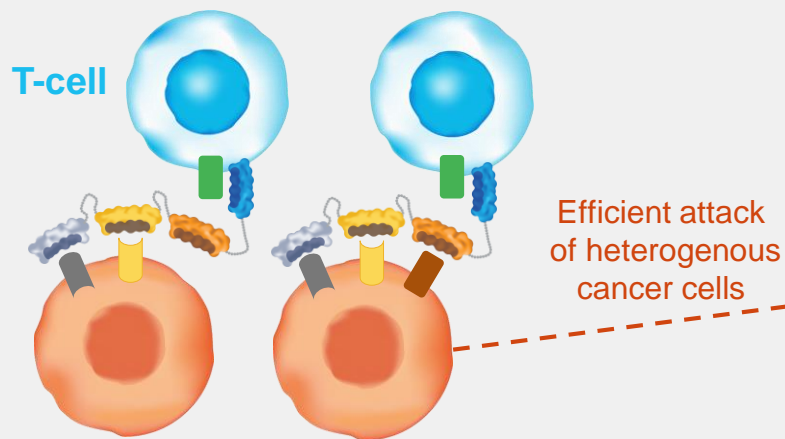
Multi-specific T-cell engager with improved benefit/risk in AML

Efficacy

- **Higher dose levels** for efficient killing of cancer cells
- **Multiple attack:** Specific killing of several malignant cell types
- **Prolonged effect:** Counteract tumor heterogeneity / targeting leukemic stem cells (LSCs)

Multi targets

High avidity engagement



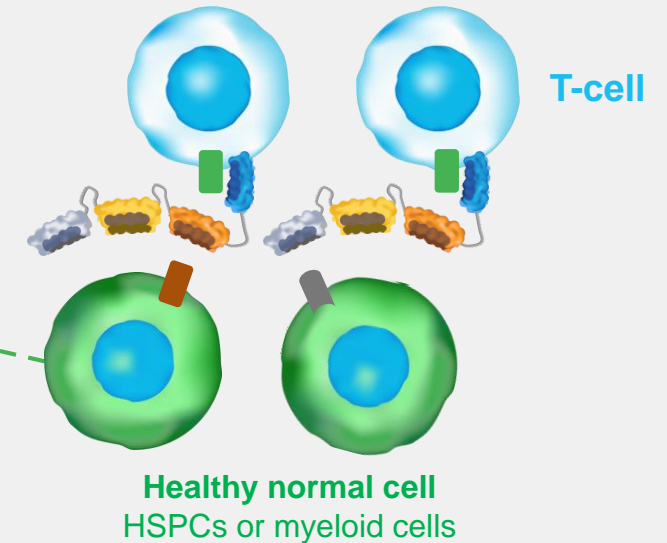
Minimal required dose level to kill cells

Safety

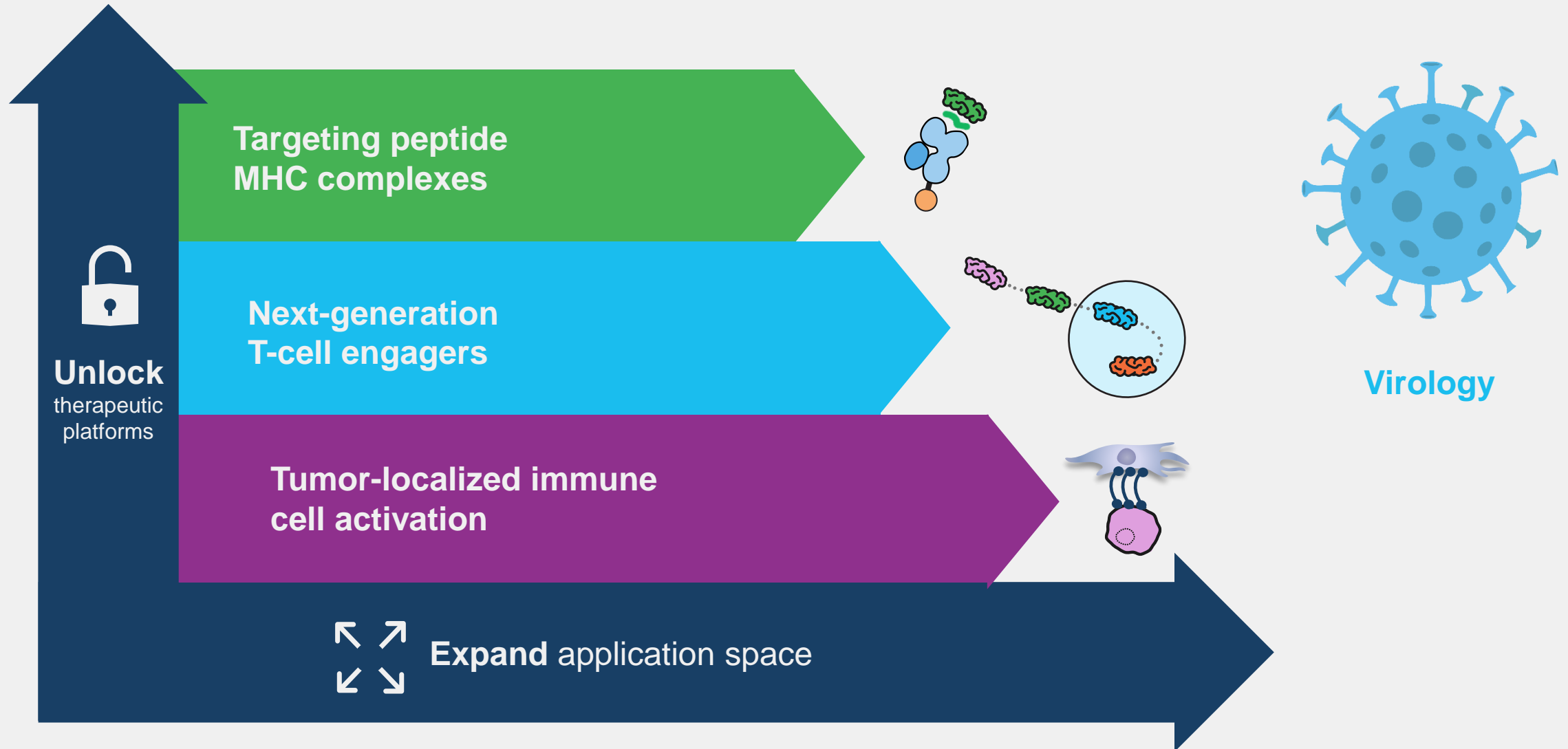
- **Reduce off-tumor effects**
- **Reduce hyper-immune stimulation** (e.g. cytokine release syndrome)

Single targets

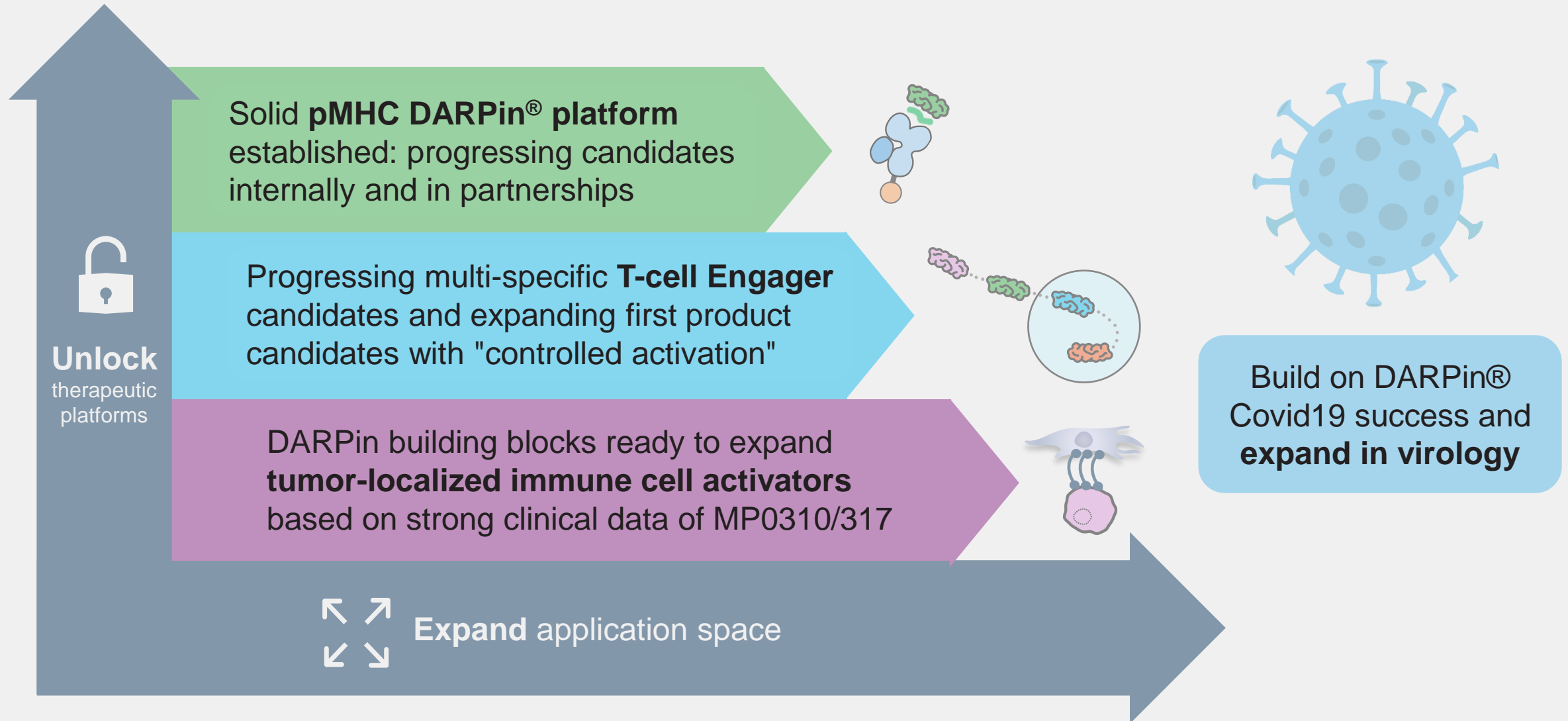
Low affinity engagement







Summary and Outlook



Summary and Outlook



Pipeline

CANDIDATE / FOCUS	PRECLINICAL	PHASE 1	PHASE 2	PHASE 3	RIGHTS
Ensovibep (MP0420) / COVID-19					
MP0423 / COVID-19					
AMG 506 (MP0310) / FAP x 4-1BB					
MP0317 / FAP x CD-40					
AML CD3 x CD33 x CD70 x CD123					
Abicipar / Neovascular AMD*					
Abicipar / DME					

■ Infectious disease
 ■ Oncology
 ■ Ophthalmology

Upcoming Potential Catalysts Across The Portfolio in 2021

Antiviral portfolio	
Ensovibep (MP0420) MP0423	<ul style="list-style-type: none"> ▪ POC with potential Emergency Use Authorization in 2021 ▪ BLA submission possible in 2022 ▪ MP0423 FIH
Novel antivirals	<ul style="list-style-type: none"> ▪ Develop novel DARPins for viral targets with first new target expected to be announced 2021
Immuno-oncology portfolio	
AMG 506 (MP0310)	<ul style="list-style-type: none"> ▪ Identify ideal dosing regimen in ongoing Phase 1 (H1/2021) ▪ Amgen potential combination trials (H2/2021)
MP0317	<ul style="list-style-type: none"> ▪ MP0317 FIH in H2 2021
T cell engagers	<ul style="list-style-type: none"> ▪ 1st Candidate selected for development ▪ Follow-up pipeline established
pMHC	<ul style="list-style-type: none"> ▪ Select Peptides for Candidate Selection – possibly with a partner

Funded into 2023

(Not incl. any future proceeds related to partnerships)

Upcoming Catalysts Across The Portfolio

Antiviral portfolio		
Ensovibep (MP0420) MP0423	<ul style="list-style-type: none"> POC with Emergency Use Authorization in 2021 BLA submission possible in 2022 MP0423 FIH 	POC for ensovibep
Novel antivirals	<ul style="list-style-type: none"> Develop novel DARPins for viral targets with first new target announced 2021 	
Immuno-oncology portfolio		
AMG 506 (MP0310)	<ul style="list-style-type: none"> Identify ideal dosing regimen in ongoing Phase 1 (H1/2021) Amgen potential combination trials (H2/2021) 	Establish Dosing for MP0310
MP0317	<ul style="list-style-type: none"> MP0317 FIH in H2 2021 	FIH of MP0317
T cell engagers	<ul style="list-style-type: none"> 1st Candidate selected for development Follow-up pipeline established 	AML candidate in clinic 2022
pMHC	<ul style="list-style-type: none"> Select Peptides for Candidate Selection – possibly with a partner 	
Funded into 2023 (Not incl. any future proceeds related to partnerships)		
		AbbVie: future of Abicipar



Financials

Financial Overview & Milestones:

- Q1 Cash 2021: CHF 145.6 (~\$155m), no debt
 - Successful capital raise of CHF 75m, completed in early July 2020
- Additional funding from Novartis transaction (CHF 60, received in October-November 2020)
 - Funded into 2023, without consideration of potential future milestones and royalties
- ~\$1B in potential payments from R&D partners yet to be realized
 - CHF 150m milestone from Novartis upon option exercise to license of COVID-DARPin
 - ~\$500m in milestones from Amgen for AMG 506 / MP0310
 - >\$360M in approval and commercial milestones associated with Abicipar
- Up to double-digit royalties outstanding with current R&D partners



Molecular Partners AG
Wagistrasse 14
8952 Zürich-Schlieren
Switzerland
www.molecularpartners.com
T +41 44 755 77 00

