

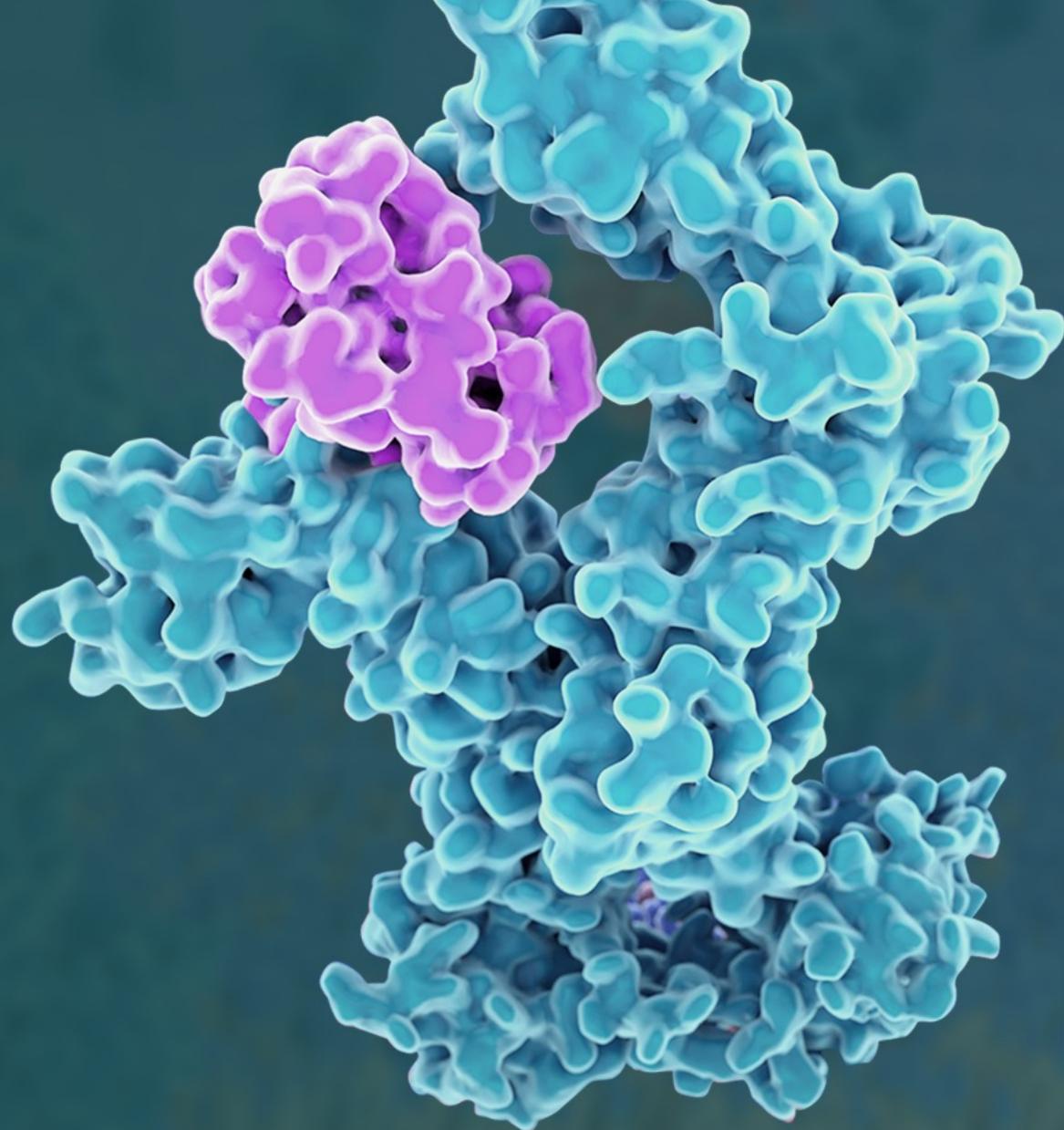
JANUARY 6, 2022

MDNA11

Phase 1/2 ABILITY Study in Advanced Solid Tumors

Clinical Update:

**Preliminary Pharmacodynamic and Biomarker Data in
Low Dose Cohorts (3 and 10 $\mu\text{g}/\text{Kg}$)**



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Phase 1/2 ABILITY Study Schema

First Patient Dosed in September 2021

US, UK and Canada expansion in 2022

Basket, Accelerated Sequential Dose Escalation and Expansion Study of MDNA11 +/- CPI

MDNA11: Monotherapy Dose Escalation

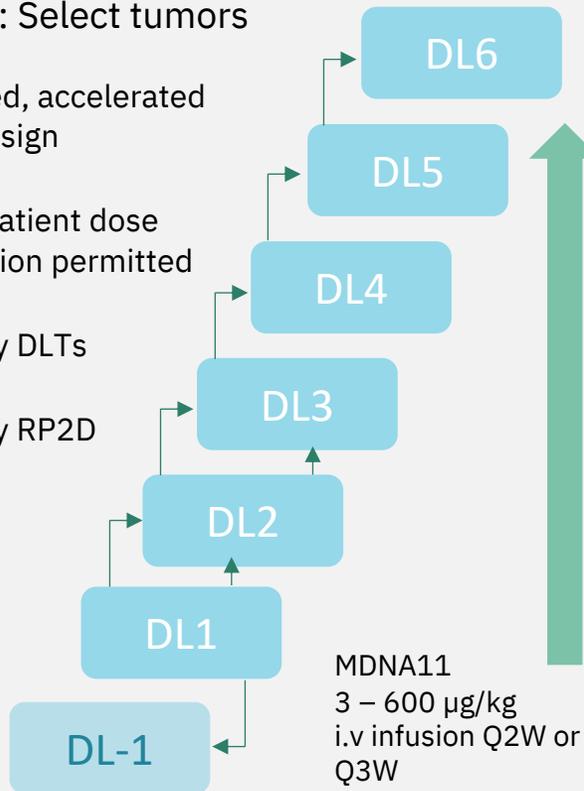
N~ 20: Select tumors

Modified, accelerated
3+3 Design

Intra-patient dose
escalation permitted

Identify DLTs

Identify RP2D



MDNA11 Monotherapy Dose Expansion

N~ 30: Melanoma, renal cell carcinoma and other select tumors (1:1:1)

MDNA11 administered alone at RP2D via i.v. infusion Q2W or Q3W

Signals of anti-tumor activity

MDNA11 + Checkpoint Inhibitor (CPI) Dose Expansion

N~ 30: Melanoma, renal cell carcinoma and other select tumors (1:1:1)

Safety run-in

MDNA11 administered at RP2D in combination with CPI via i.v. infusion Q3W (planned)

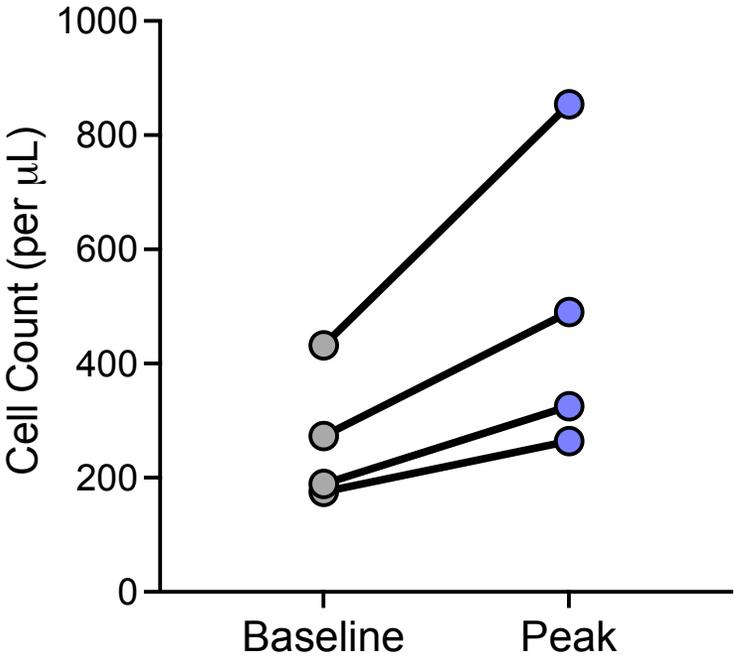
Signals of anti-tumor activity



Preferential Increases in CD8 T and NK Cell Proliferation

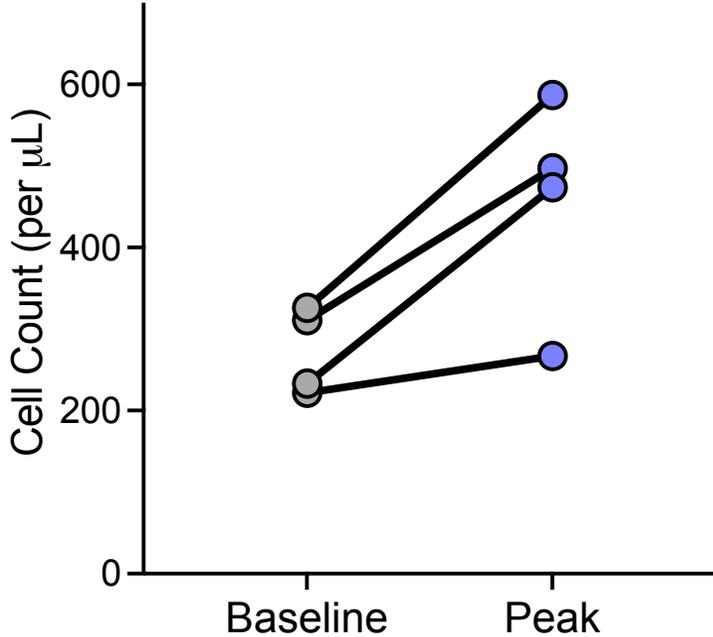
CD8 T Cells

Max Fold-Change: 1.98
Range: (1.51 – 1.98)



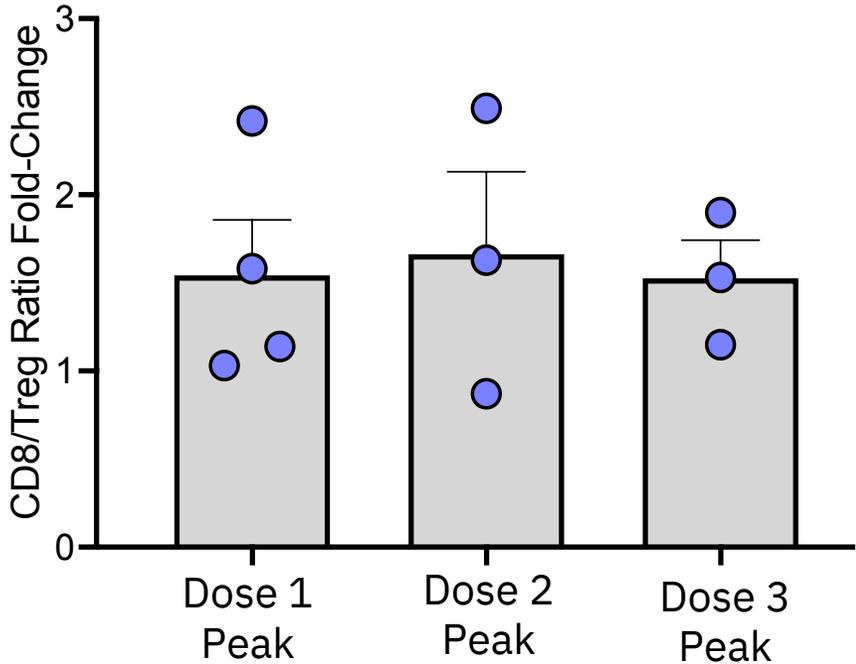
NK Cells

2.03
(1.20 – 2.03)



Fold-Change in CD8/Treg Ratio

2.42 **2.49** **1.9**
(1.03-2.42) **(0.87-2.49)** **(1.15-1.9)**

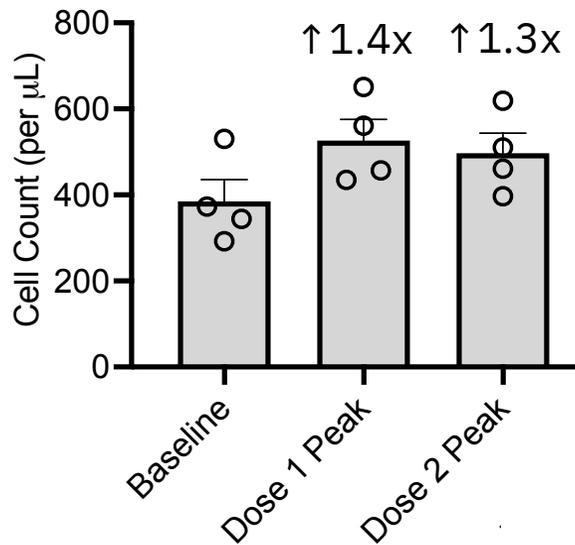


MDNA11 (Dose ≤ 10 µg/kg, IL-2 content 2 µg/kg)

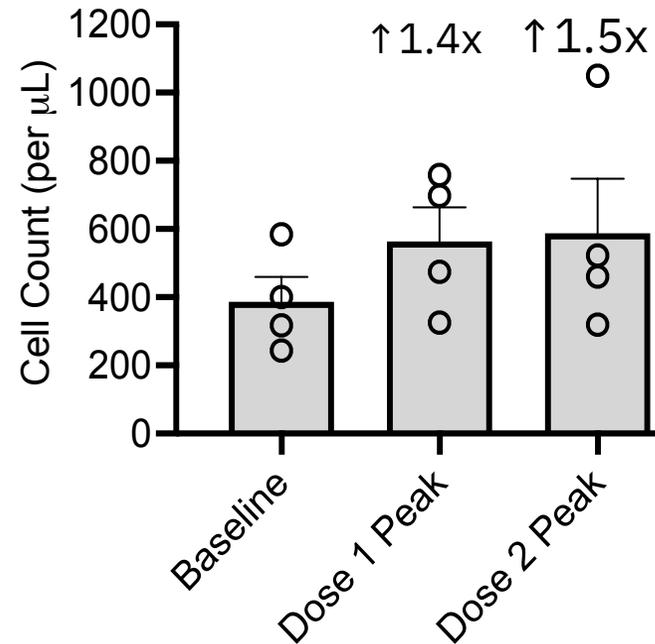


MDNA11 - Favorable Changes in Activation Markers

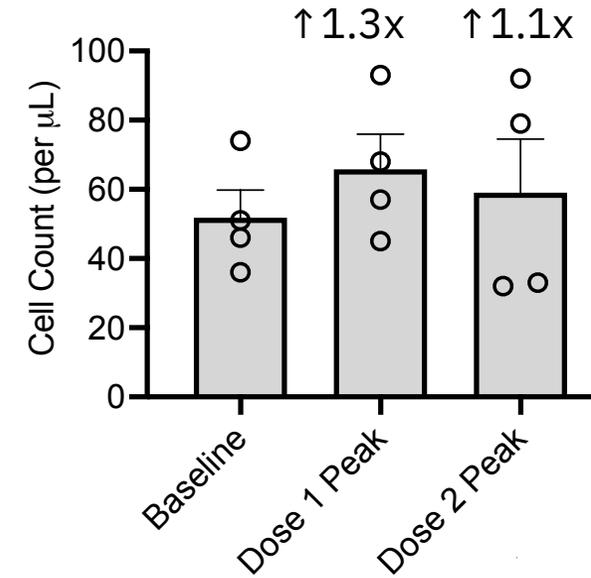
TIGIT Expressing Cells



LAG3 Expressing Cells

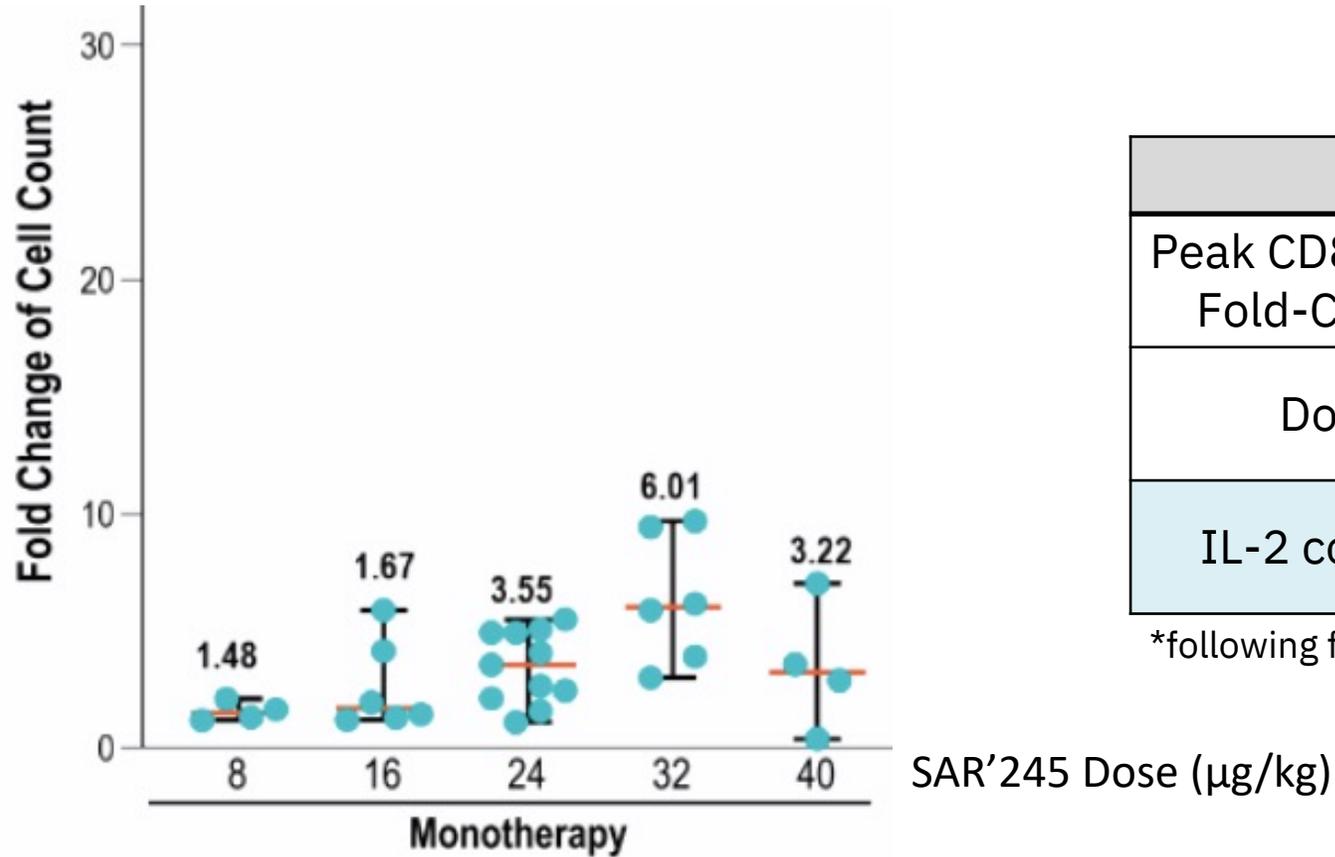


PD1 Expressing Cells



Comparison with Competition

SAR'245 Requires 8X Higher Dose Compared With MDNA11



	MDNA11	SAR'245
Peak CD8+ T Cell Fold-Change	1.25-1.72*	1.67
Dose	≤ 10 µg/kg	16 µg/kg
IL-2 content	≤ 2 µg/kg	16 µg/kg

*following first dose

Falchook et al., SITC 2021

Note:

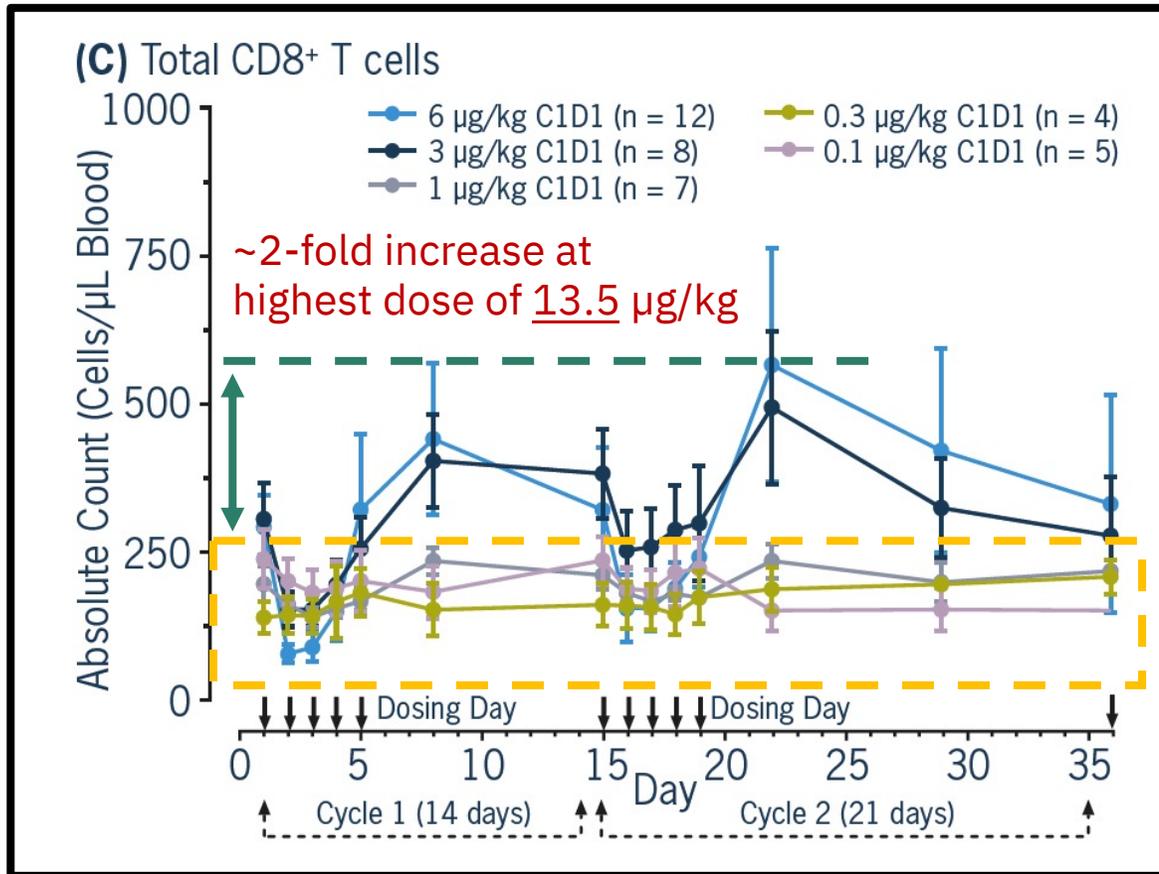
SAR'245 dose is based on IL-2 content

MDNA11 MW = 83 KDa

IL-2 content: ~20% (15 KDa)



No CD8 T Cell Response with Nemvaleukin Alfa at MDNA11 Doses



ALKS 4230 MW = 34.4 KDa
IL-2 content = 15 KDa (~ 45%)

MDNA11 MW = 83 KDa
IL-2 content = 15KD (~20%)

ALKS4230 (µg/kg/day)	IL-2 Content (µg/kg/day)	Cumulative IL-2 Dose/5 day Cycle (µg/kg)	
0.1	0.045	0.23*	No increase
0.3	0.14	0.68*	
1	0.45	2.25*	
3	1.4	6.75	Up to 2x ↑
6	2.7	13.5	

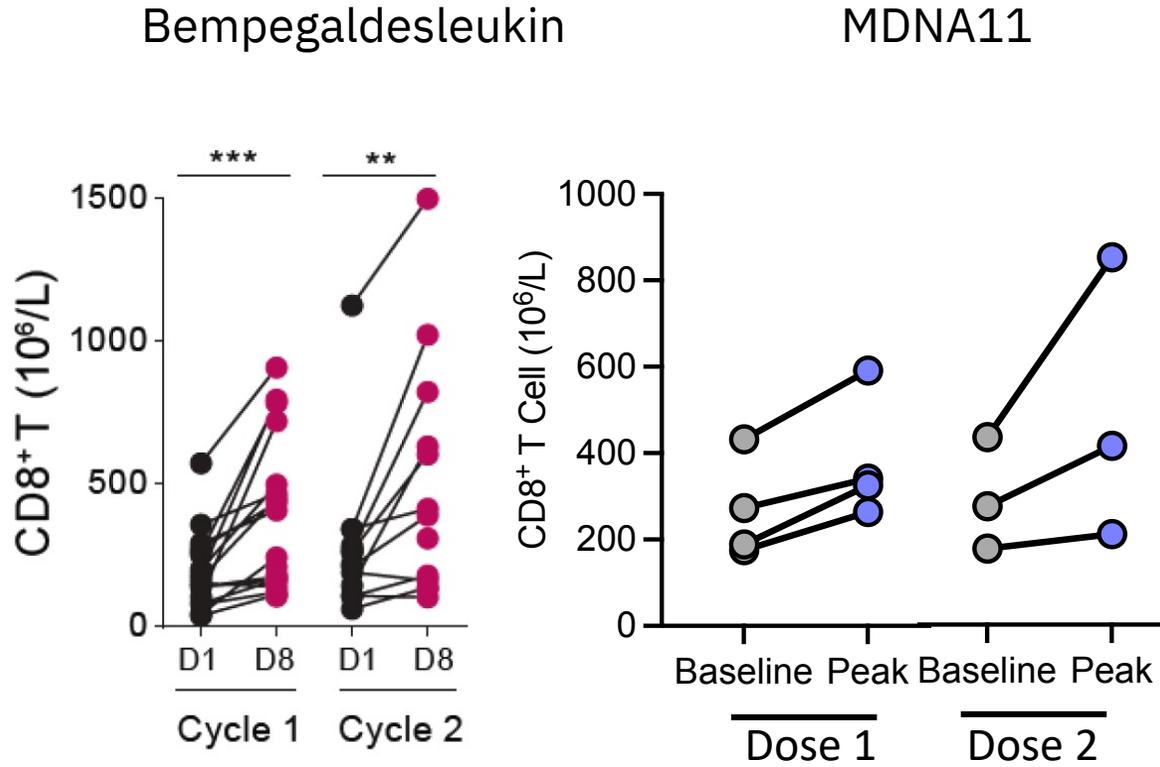
* Doses comparable to MDNA11 IL-2 content

Artistry-1 trial Vaishamapyan et al., SITC 2019



Bempegaldesleukin Expands Tregs Preferentially to CD8 T Cells

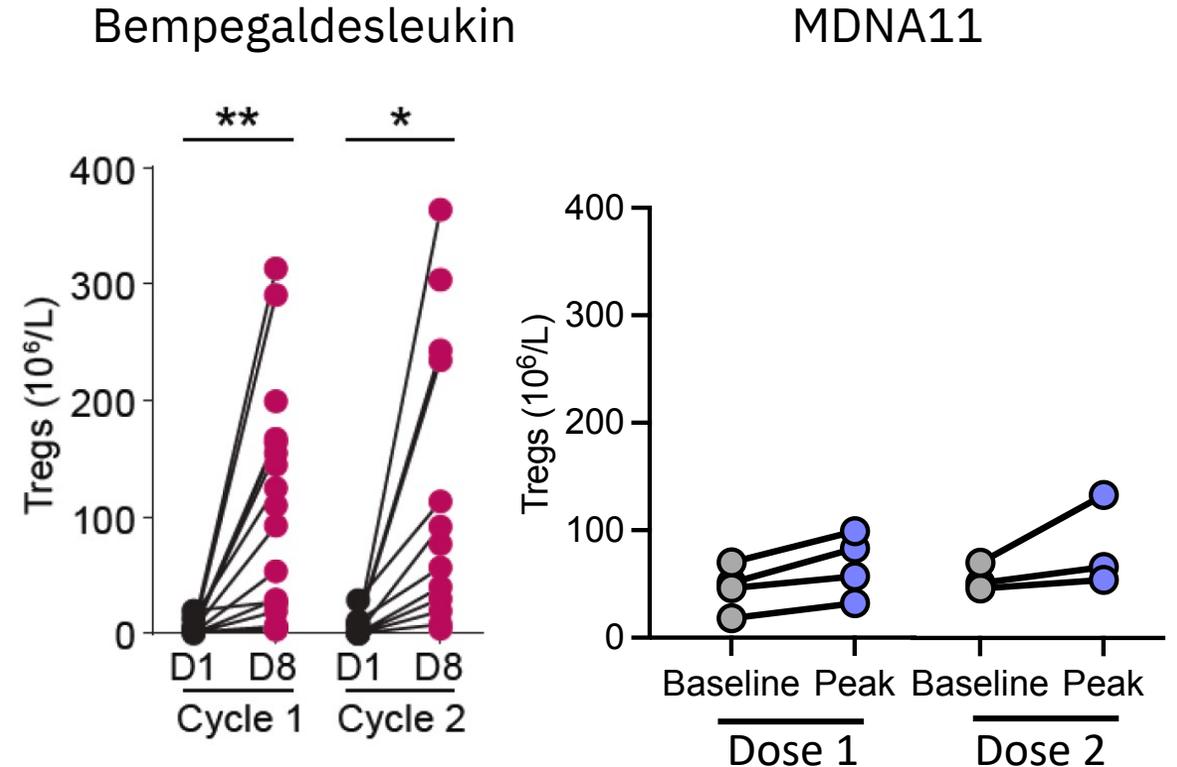
CD8 T Cell Number



(Dose 3, 6, 9 and 12 µg/kg)

(Dose ≤ 10 µg/kg,
IL-2 content ≤ 2
µg/kg)

Treg Cell Number



(Dose 3, 6, 9 and 12 µg/kg)

(Dose ≤ 10 µg/kg,
IL-2 content ≤ 2
µg/kg)

Bentebibel et al., 2019



Thank you

Fahar Merchant, PhD

President and CEO

Elizabeth Williams

Chief Financial Officer



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