KINETA®

April 2023

Developing next-generation immunotherapies that address cancer immune resistance

KA (Nasdaq)

Disclaimers and other information

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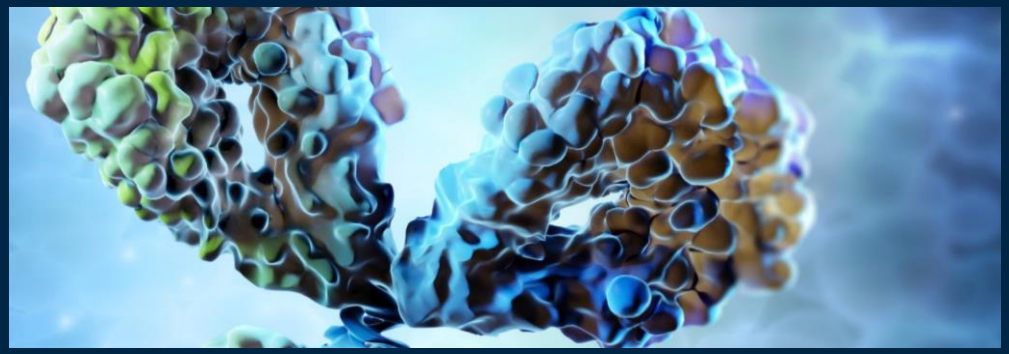
Kineta is developing next-generation immunotherapies that address cancer immune resistance



Innate Immunity Focused Pipeline	KVA12123 • VISTA blocking mAb to address immunosuppression in the TME • Opened Phase 1/2 clinical study evaluating KVA12123 alone and in combination with pembrolizumab in advanced solid tumors Preclinical Anti-CD27 agonist mAb to address exhausted T cells
Catalysts	3Q23 | KVA12123 initial clinical safety data 4Q23 | KVA12123 initial clinical efficacy data (ORR)
Runway	Through mid-2024
Partnerships	MERCK Genentech *A Member of the Roche Group* FAIR Therapeutics

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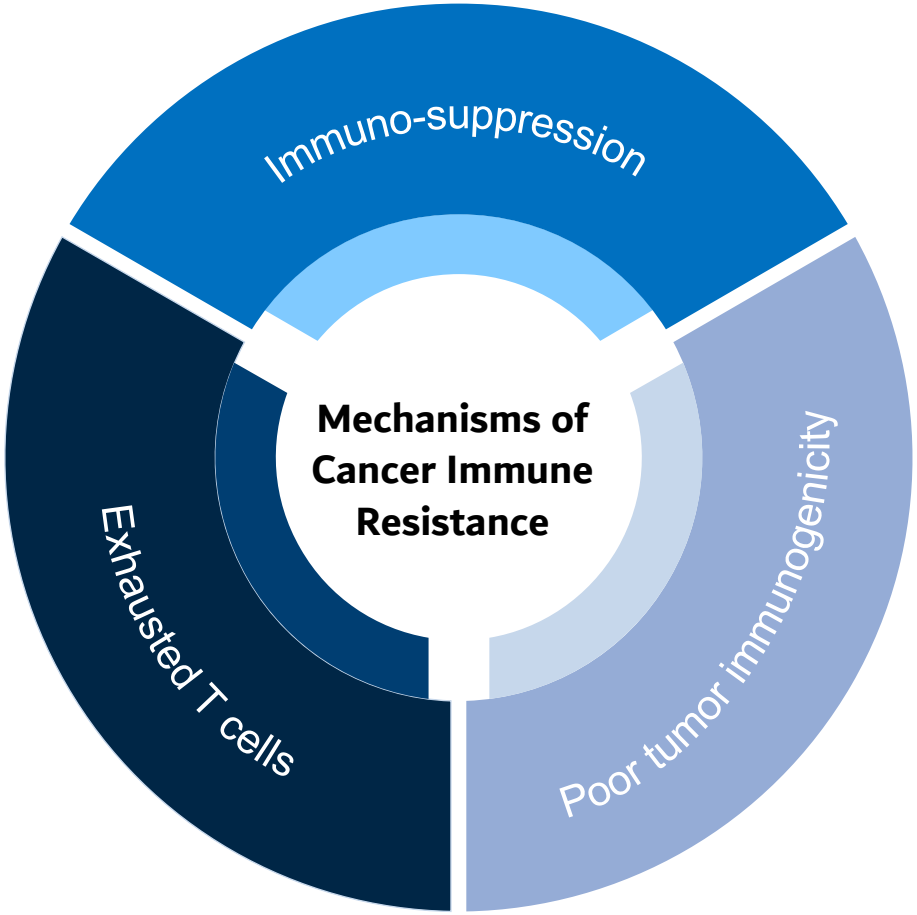
Immune resistance is a major challenge with current cancer therapy



- Blockade and down-regulation of immune response
- T cells lose cancer fighting function
- Tumor cells are invisible to immune system

Next-generation cancer treatments require:

Improving survival for checkpoint inhibitor (CPI) non-responders (**70-80%**)*

Reprogramming the immune system to attack cancer

Integrating **innate and adaptive immune** responses

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*Based on publicly available information

Kineta pipeline integrates innate and adaptive immunity to address mechanisms of cancer resistance

Innate immunity

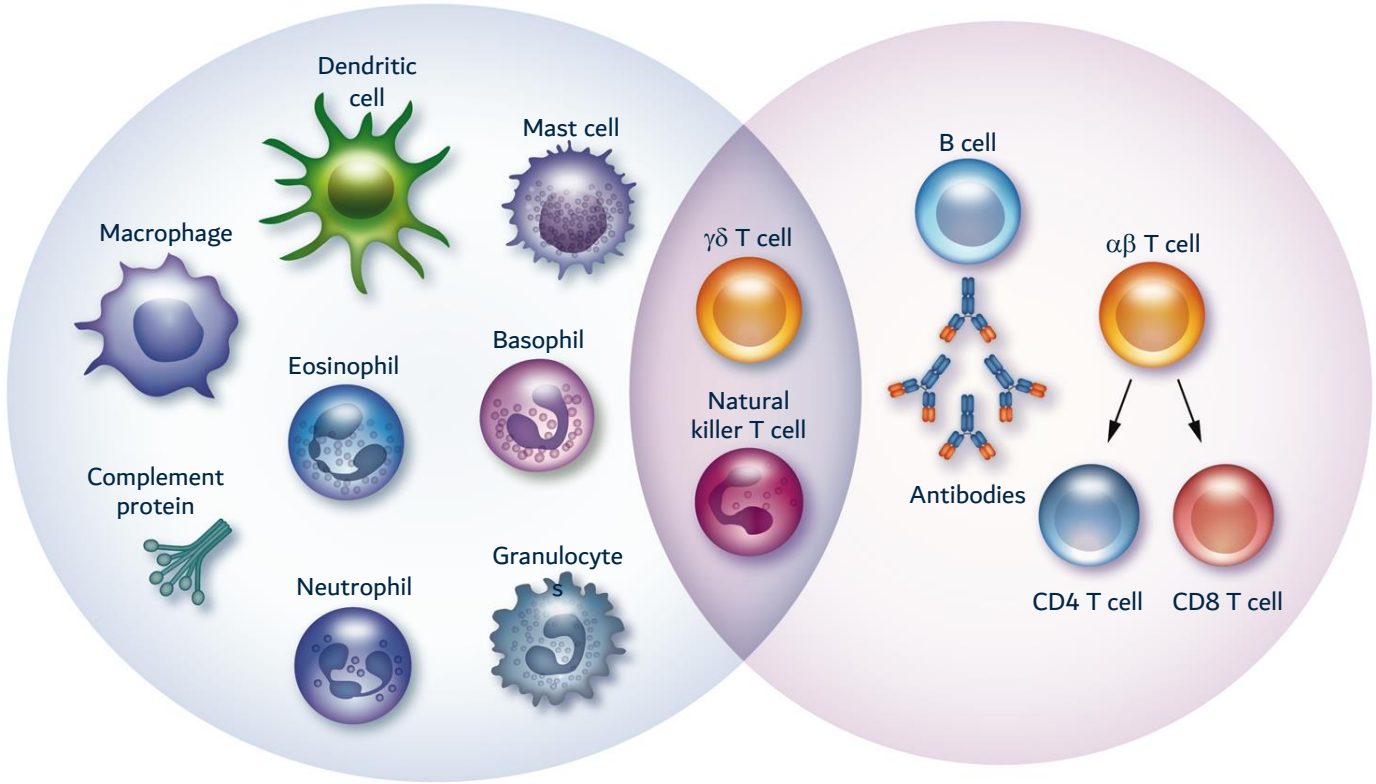
Involved in early response to cancer

Necessary driver for appropriate adaptive immunity

Significant cause of cancer resistance

Adaptive immunity

Most competitor drug development is focused **only** on T cell adaptive immunity



Kineta's immuno-oncology pipeline aims to address the mechanisms of cancer immune resistance

Drug program	Discovery	Pre-clinical	Phase 1	Phase 2	Phase 3	Anticipated Milestones
Immuno-suppression: αVISTA mAb						
Indications: Advanced solid tumors incl. NSCLC, CRC, OC	**KVA12123**					**1Q 2023:** Opened Phase 1/2 clinical study **2Q 2023:** First patient dosed combination **3Q 2023:** Initial Phase 1 clinical safety data **4Q 2023:** Initial Phase 1 clinical efficacy data
Exhausted T-cells: αCD27 agonist mAb						
Indications: Advanced solid tumors						**2H 2024:** IND filing **2H 2024:** Start Phase 1 clinical study

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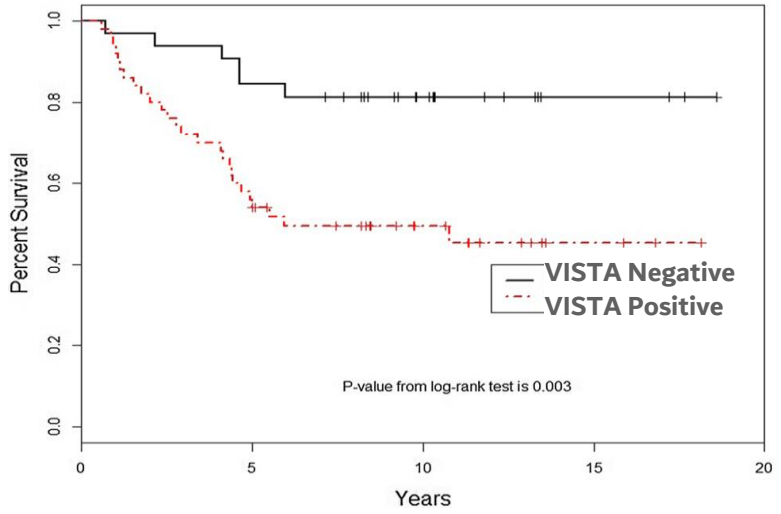
KVA12123

Potentially differentiated VISTA blocking immunotherapy

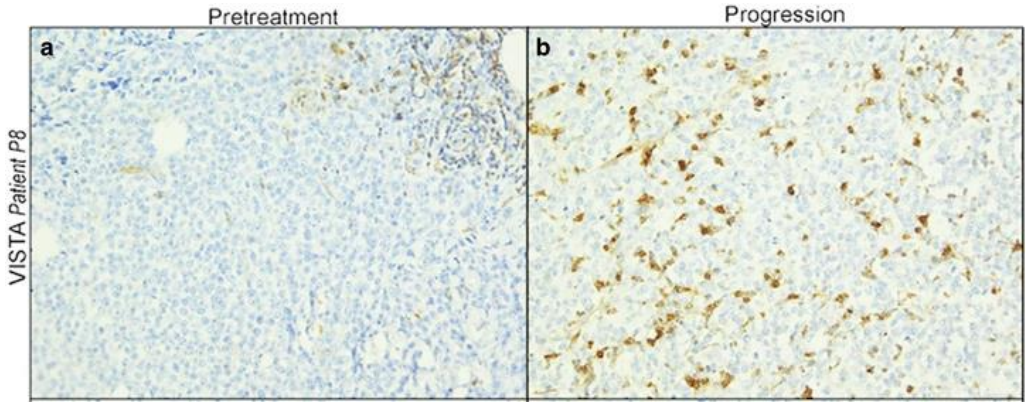
VISTA is a key driver of immunosuppression in the tumor microenvironment

- Immunosuppressive protein expressed on **myeloid cells**
- Highly expressed in **cold tumors** including lung, colon and ovarian cancers
- Correlates with **poor outcomes** in cancer patients
- Up-regulated after CPI therapy and **associated with treatment failure**

Melanoma patient survival by VISTA expression in tumor-infiltrating immune cells [1]



VISTA expression increases in melanoma patient during pembrolizumab relapse/progression [2]



Brown staining in human tumors indicates VISTA expression

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References: 1. Kuklinski et al. 2018; 2. Kakavand et al. 2017

KVA12123: Potentially differentiated VISTA blocking immunotherapy

Product	Development stage	Isotype	pH Binding	Single Agent Tumor Model Efficacy	CRS Cytokine Release
Kineta KVA12123	Phase 1	Engineered IgG1 mAb that binds to a unique epitope	Binds at both physiologic pH and acidic pH in the TME	Strong single agent tumor growth inhibition and in combination with PD-1 in preclinical models	No CRS-associated cytokine release or neurotoxicity seen in preclinical models
Hummingbird HMBD002	Phase 1	IgG4	Physiologic	Moderate	IL-6
Pierre Fabre WO180	Phase 1				
Curis* CI-8993	Phase 1 (de-prioritized)	IgG1	Physiologic	Moderate	TNFα, IFNγ, IL2, IL-1β
Sensei SNS-101	Preclinical	IgG1	Acidic	Weak	TNFα
Pharmabcine PMC309	Preclinical	IgG1	Acidic & Physiologic	Moderate	IFNγ

Other discovery stage programs: Apexigen, Five Prime Therapeutics/BMS, xCella Biosciences
Empty cells indicate no public data available

**Curis announced 11/9/2022 : "Concentrating its resources to focus on and accelerate emavusertib", the company's lead asset and "deprioritization of other programs" (CI-8993)*

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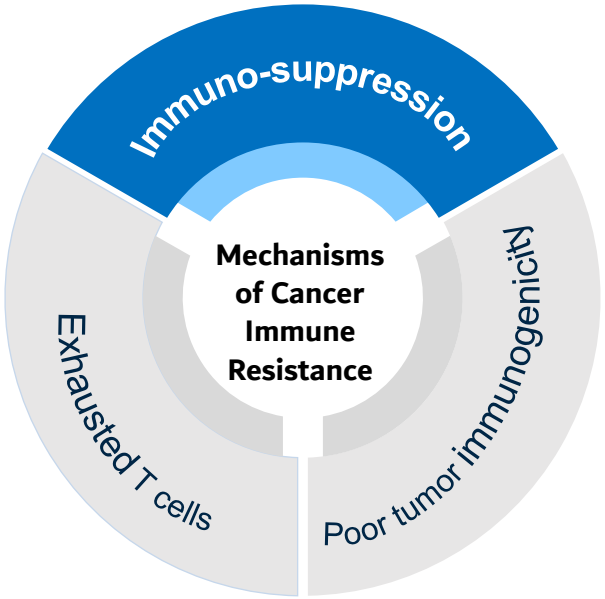
Kineta data and analysis on file

Blocking VISTA can reverse immunosuppression in the TME

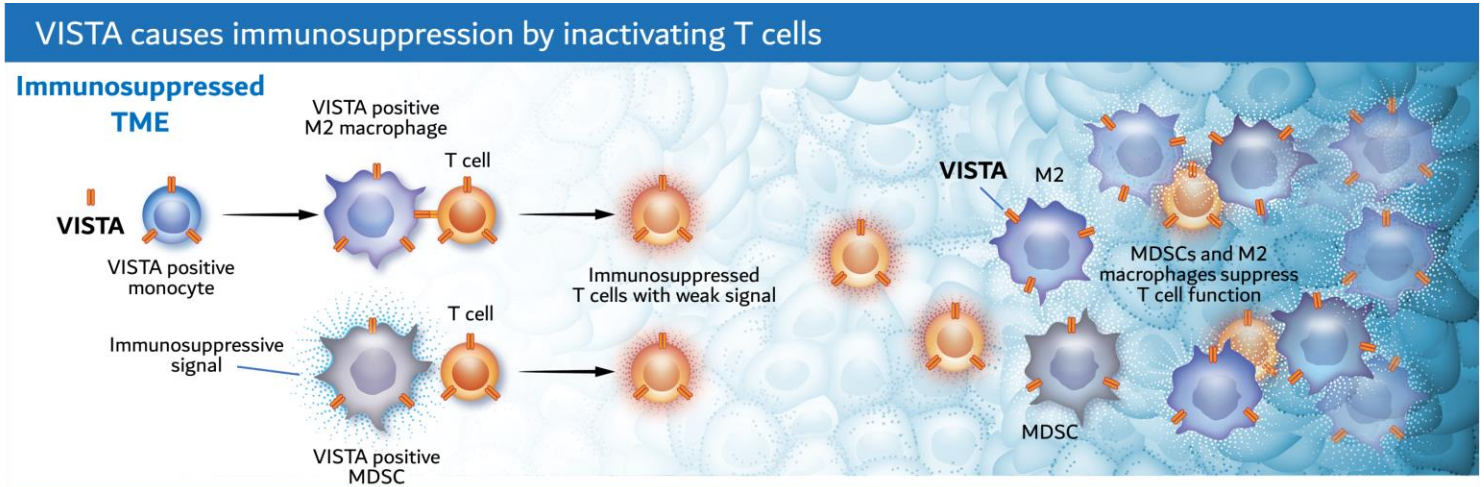


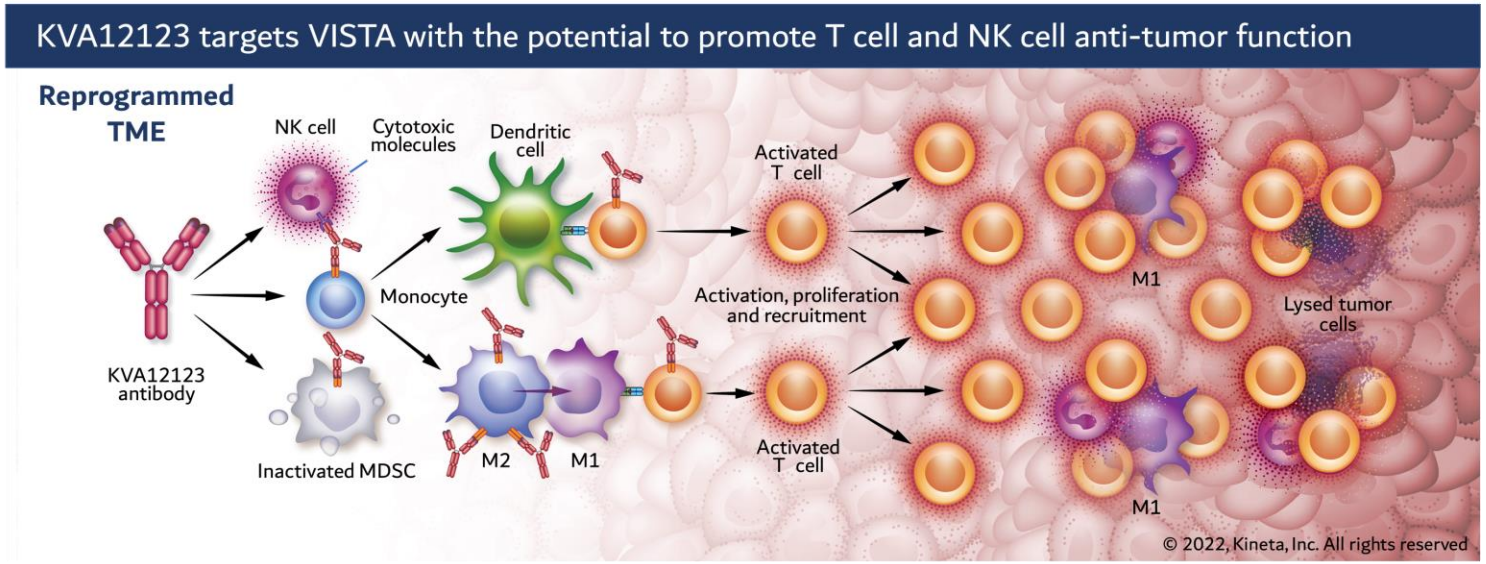
Inhibits **MDSC** (myeloid-derived suppressor cells)

Promotes **T_{eff}** function

Enhances **NK cell** activation

Enhances **monocyte** activation





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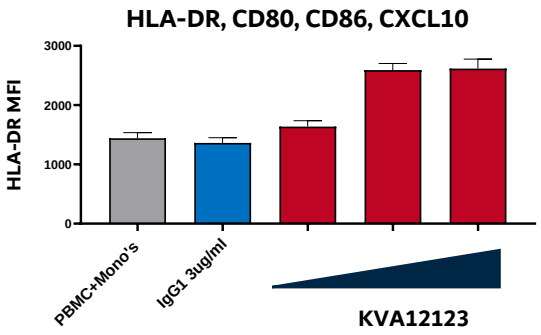
KVA12123 activates both innate and adaptive immune cells *in vitro*

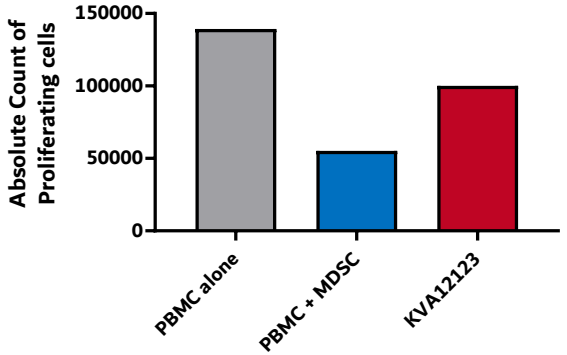
Increases monocyte differentiation and activation

monocyte



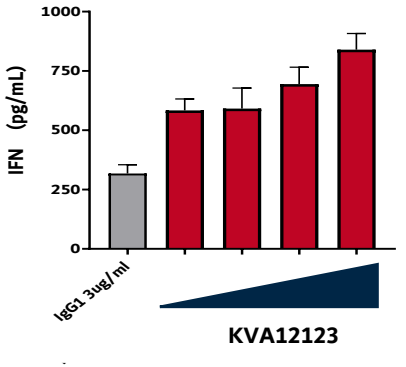
Reduces MDSC-mediated T cell suppression

MDSC



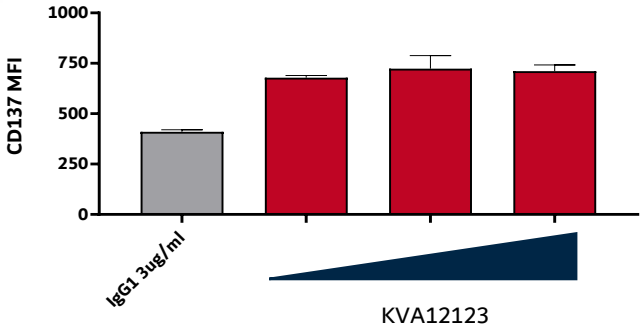
Increases HLA-dependent T cell activation

T cell

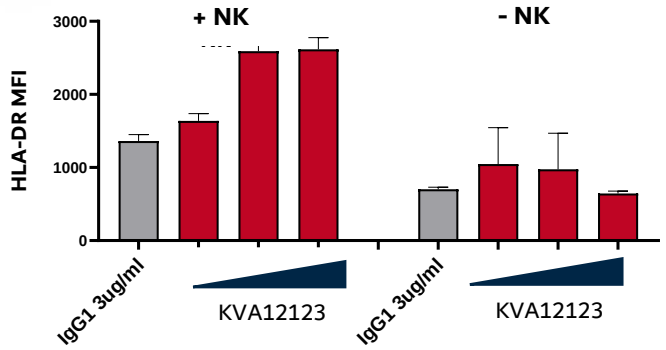


Enhances NK cell activation

NK cell



NK dependent mechanism of action



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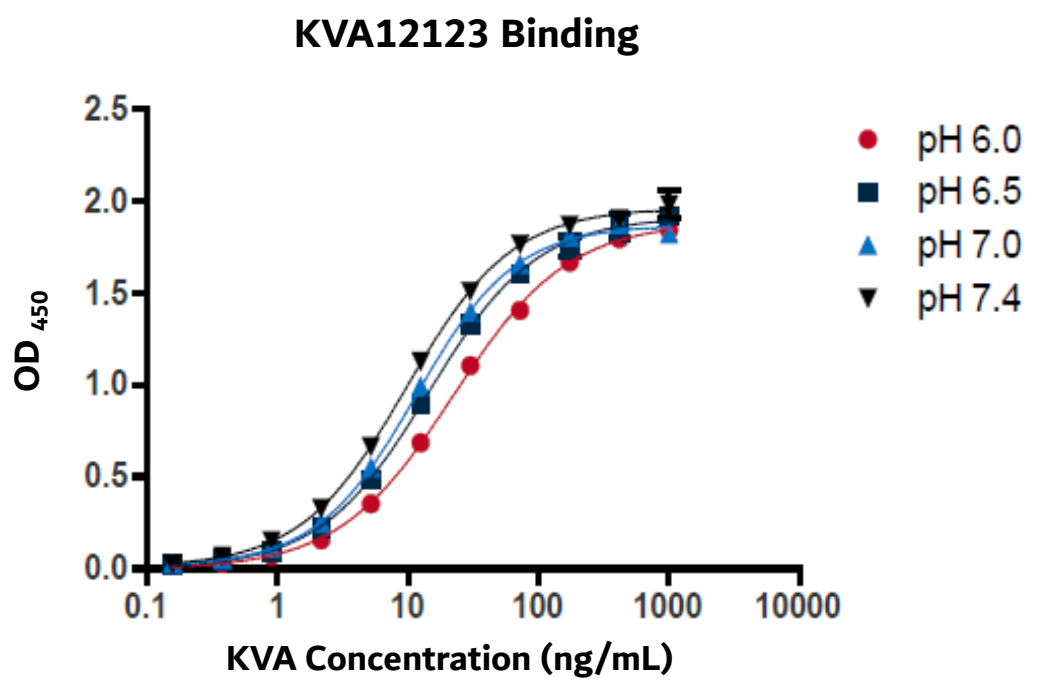
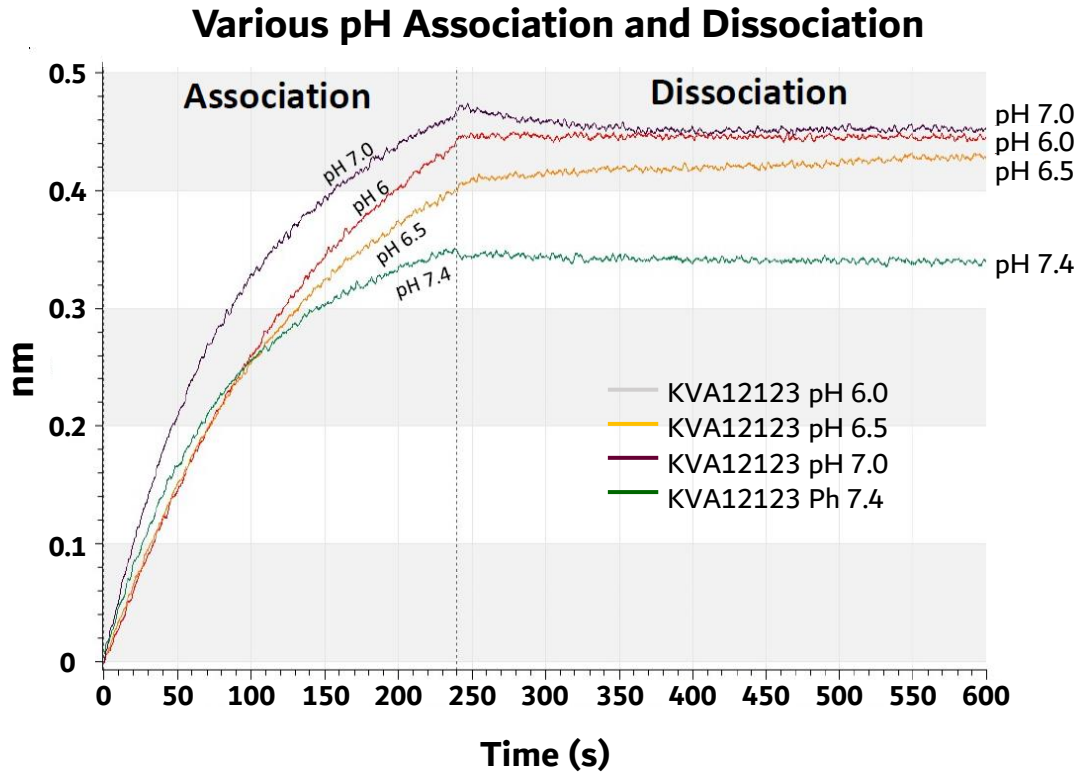
Kineta data on file

KVA12123 binds at physiologic and acidic pH

ELISA



Octet



Binding studies by ELISA and Octet demonstrate rapid on-rate and slow off-rate from pH 7.4 to pH 6.0

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Kineta data on file

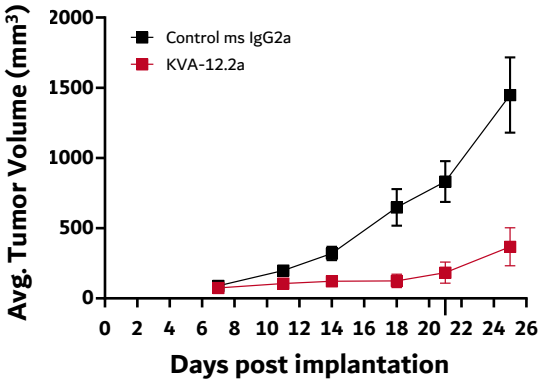
KVA12123 demonstrates single agent tumor growth inhibition and in combination with PD-1 in preclinical models

Monotherapy

Bladder Cancer Model MB49

hVISTA KI mice

Mean Tumor Volume



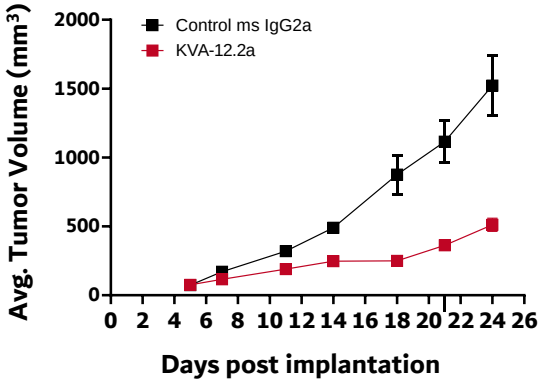
Tumor Growth Inhibition

Anti-VISTA: **75%**

T Cell Lymphoma Model EG7

hVISTA KI mice

Mean Tumor Volume



Tumor Growth Inhibition

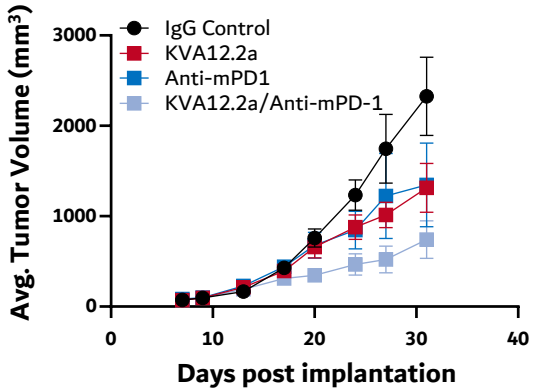
Anti-VISTA: **66%**

Combination therapy

Colon Carcinoma Model MC38*

hVISTA KI mice

Mean Tumor Volume



Tumor Growth Inhibition

Anti-VISTA: **35-42%**

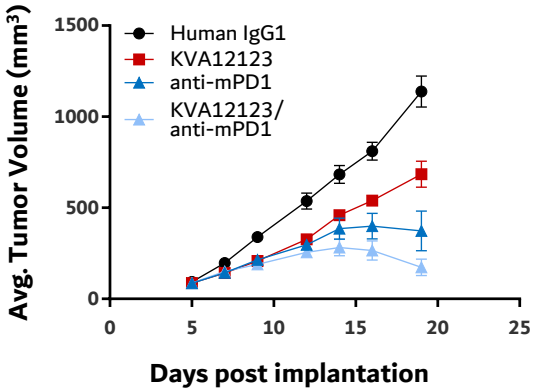
Anti-PD1: **42-60%**

Combination: **68%**

Bladder Cancer Model MB49*

hVISTA KI mice

Mean Tumor Volume



Tumor Growth Inhibition

Anti-VISTA: **40%**

Anti-PD1: **67%**

Combination: **85%**

***Combination therapy studies used sub-optimal doses of each agent**

KVA12.2a: mouse isotype equivalent of KVA12123

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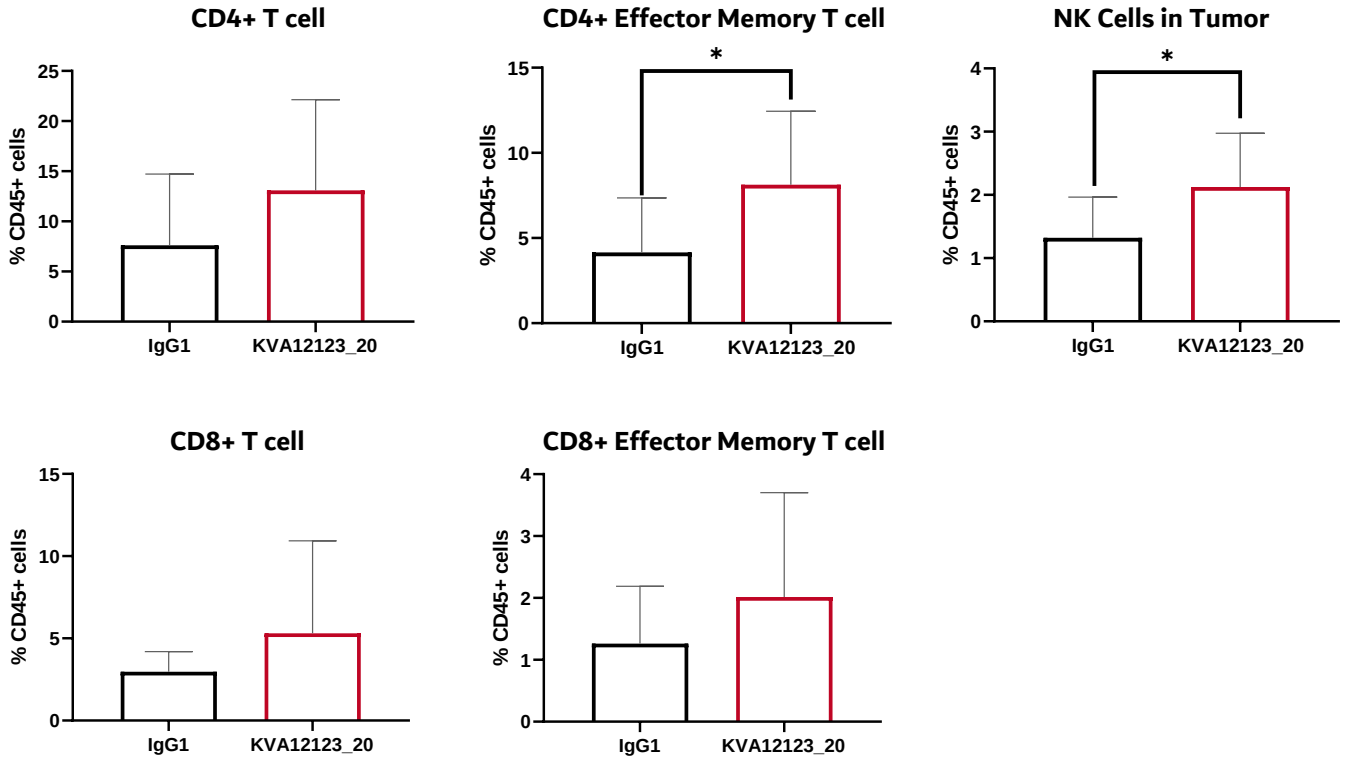
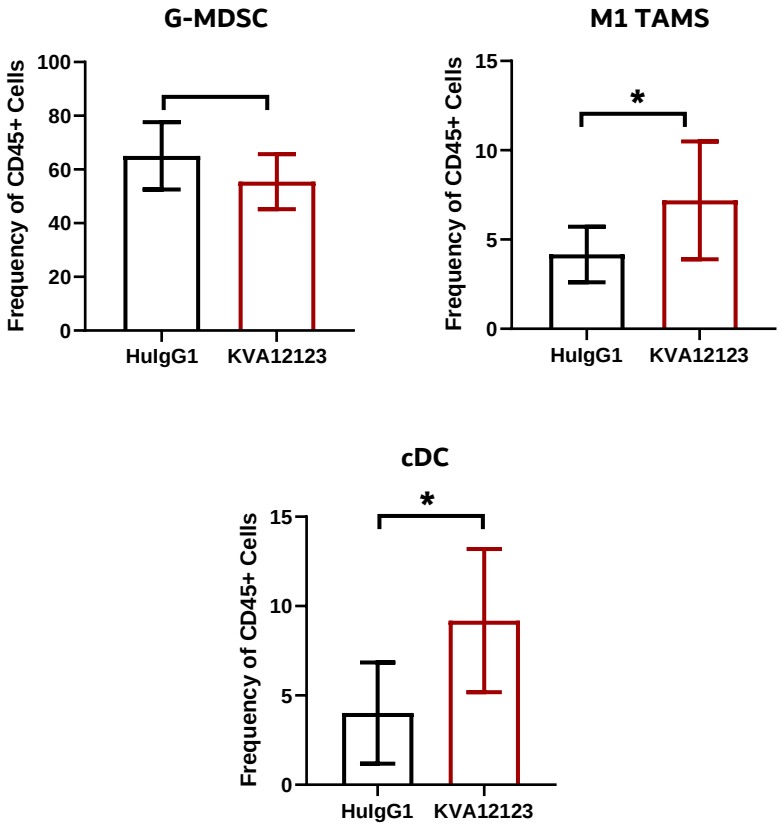
Kineta data on file

KVA12123 drives an integrated innate and adaptive anti-tumor immune response in MB49 model (*ex vivo*)

Lymphoid compartment



Myeloid compartment



KVA12123 was observed to be well-tolerated in NHP toxicology studies

No mortality

No change in CRS cytokine levels (IL6 or TNFα)

No treatment-related adverse events

Well tolerated

No overt clinical signs or weight loss

Kineta has completed multiple, single and repeat-dose toxicology studies in NHP with doses of KVA12123 up to 100 mg/kg (>100-fold safety margin over target human exposure)

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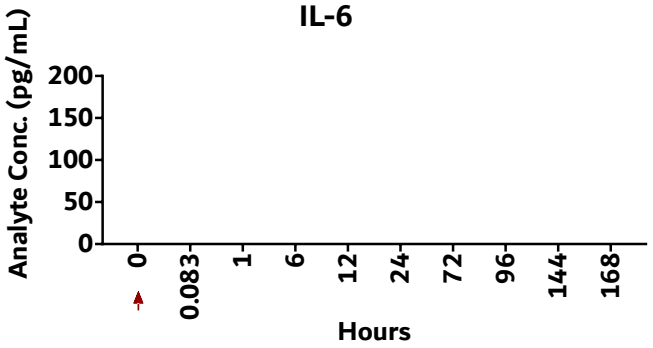
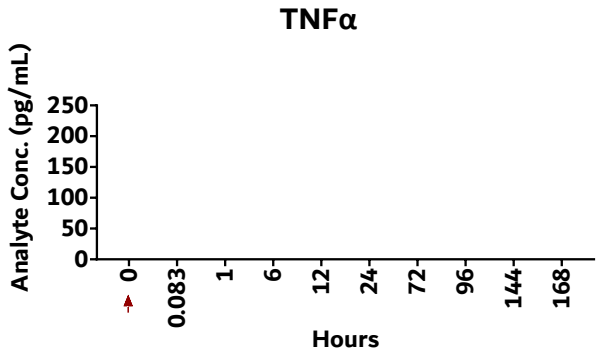
KVA12123: No CRS-associated signal in preclinical models in NHP toxicology studies as well as in human whole blood

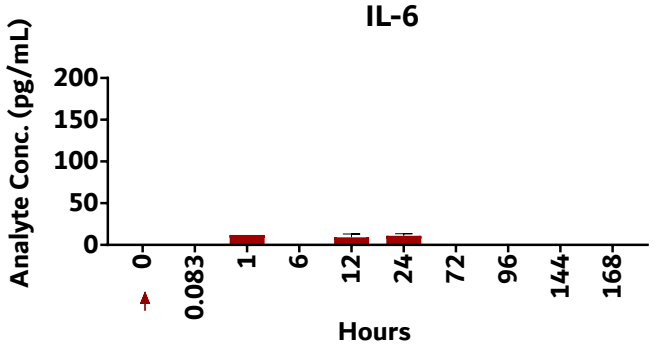
NHP

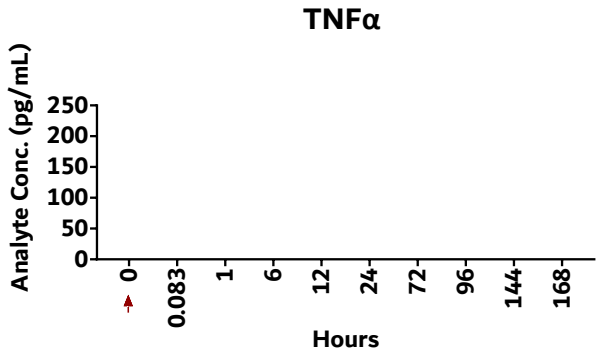
30 mg/kg dose



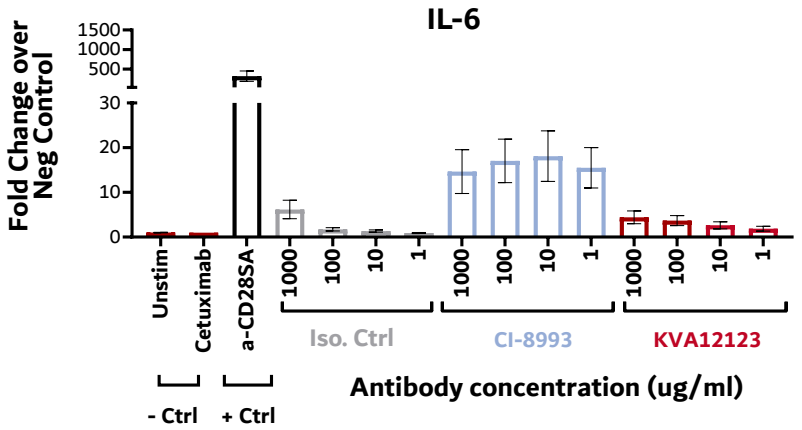


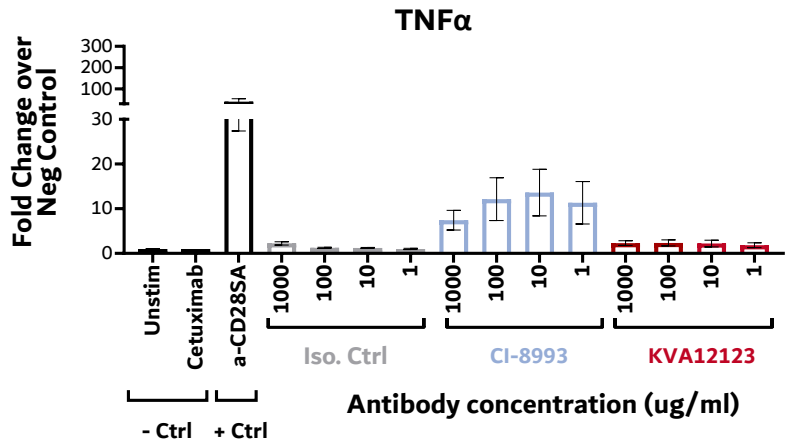
100 mg/kg dose





Human Whole Blood





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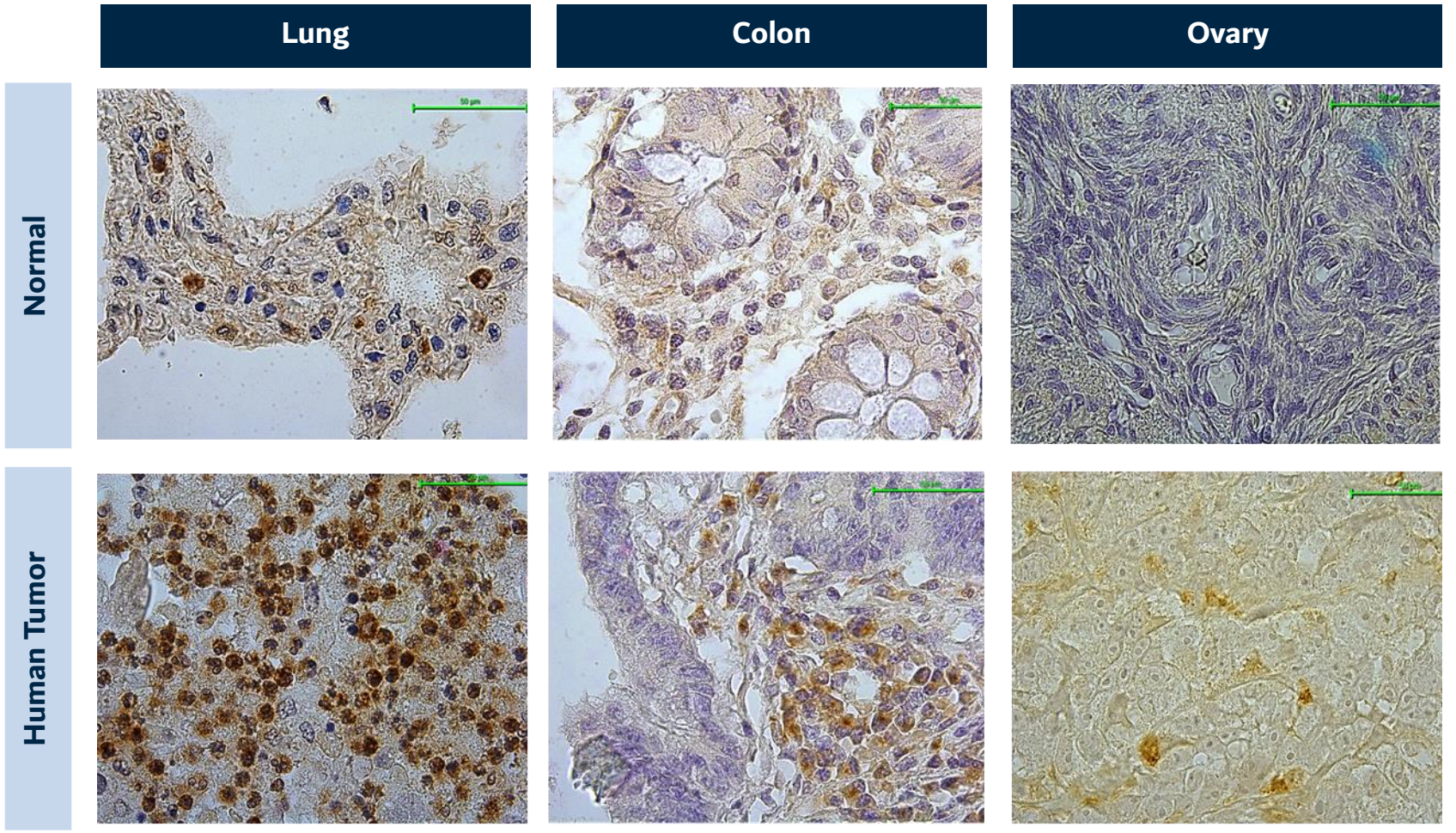
Clinical applications for KVA12123 are primarily focused on solid tumors with high levels of VISTA expression



Brown staining in human tumors indicates VISTA expression

Kineta data on file

Phase 1 / 2 open-label clinical trial of KVA12123 alone and in combination with pembrolizumab in patients with advanced solid tumors

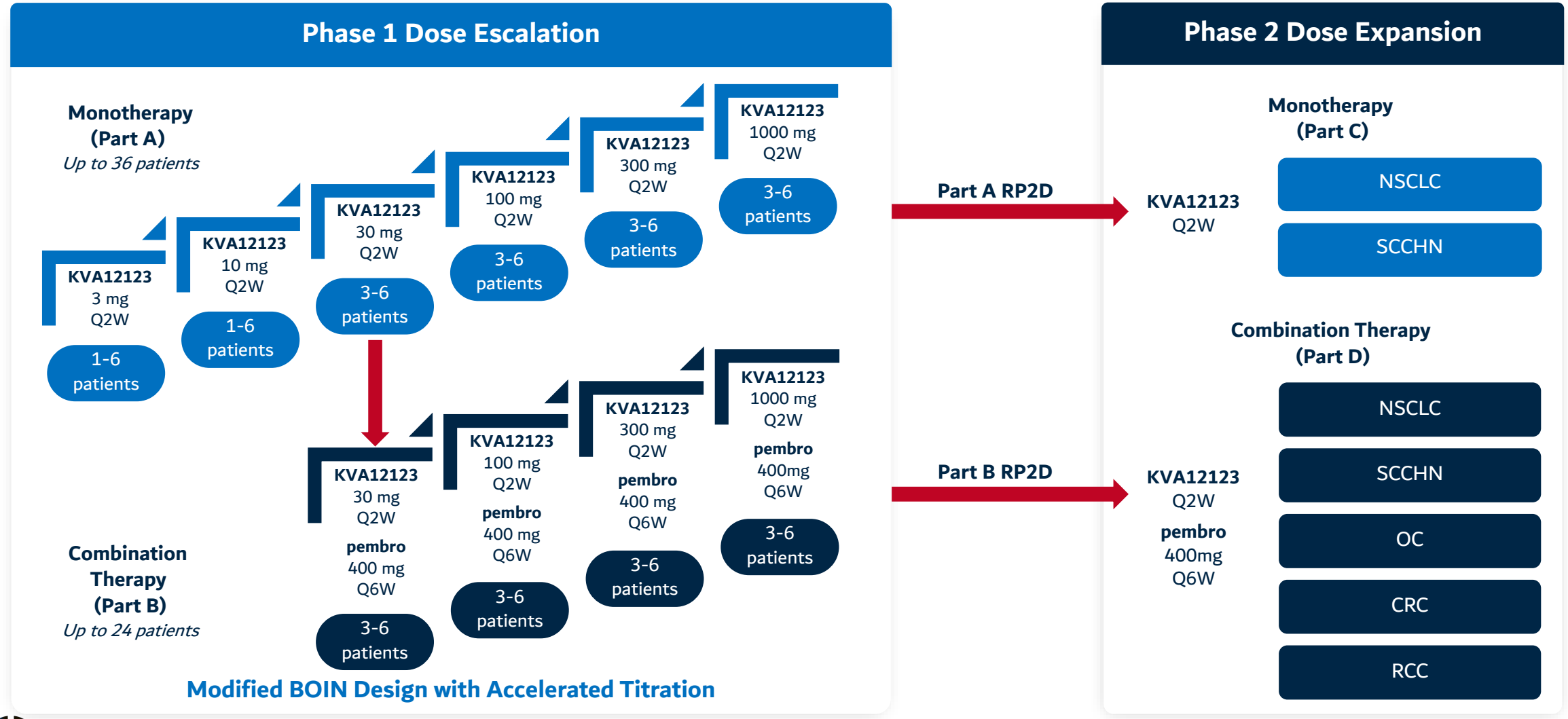
Patient population:

- Phase 1 basket trial in patients with advanced solid tumors (up to 60 patients)
- Phase 2 in NSCLC, HNSCC, OC, CRC, RCC and TBD other patients

Study objectives:

- Primary: Safety and tolerability, recommended Phase 2 dose (RP2D) or maximum tolerated dose (MTD) of KVA12123
- Secondary: Pharmacokinetics, immunogenicity, tumor response in subjects with advanced solid tumors per iRECIST (ORR)
- Exploratory: Biomarker and receptor occupancy

Phase 1 / 2 open-label clinical trial of KVA12123 alone and in combination with pembrolizumab in patients with advanced solid tumors



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KVA12123
Clinical trial strategy

Clinical research sites

- Selected to provide diverse advanced solid tumor patients

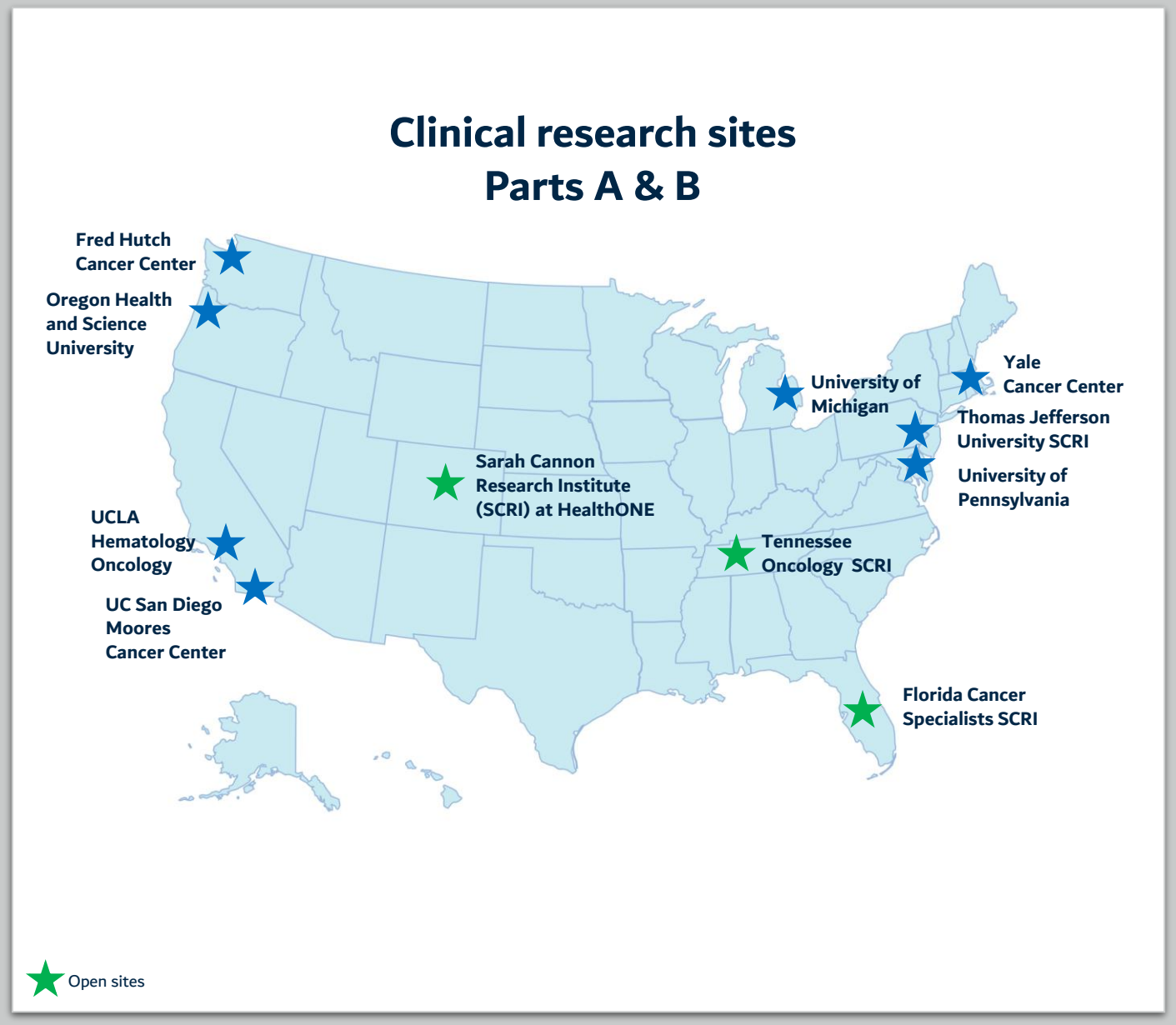
Merck research collaboration

- Clinical trial collaboration and KEYTRUDA® supply agreement

MERCK

Exploratory biomarkers:

- Receptor Occupancy (RO)
- Chemokine and cytokine levels in blood
- Immune cell populations in blood
- VISTA expression in tumor pre- and post-treatment



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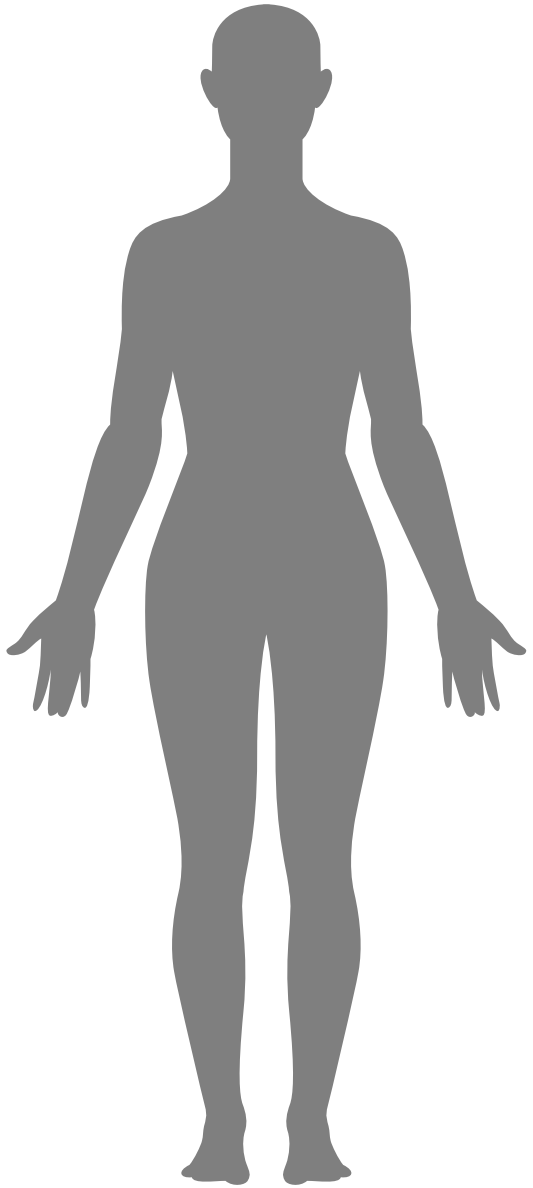
Large commercial market opportunity in initial indications in solid tumors for KVA12123

2.7M

annual new patient population

$48B

market opportunity



NSCLC [1]

980K annual new patients

$31.8B market

Colorectal cancer [2]

1.1M annual new patients

$10.3B market

Ovarian cancer [3]

660K annual new patients

$5.9B market

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Source: 1. NSCLC Globaldata: Global drug forecast and market analysis to 2028
2. CRC Globaldata: Global drug forecast and market analysis to 2028
3. OC Globaldata: Global drug forecast and market analysis to 2028

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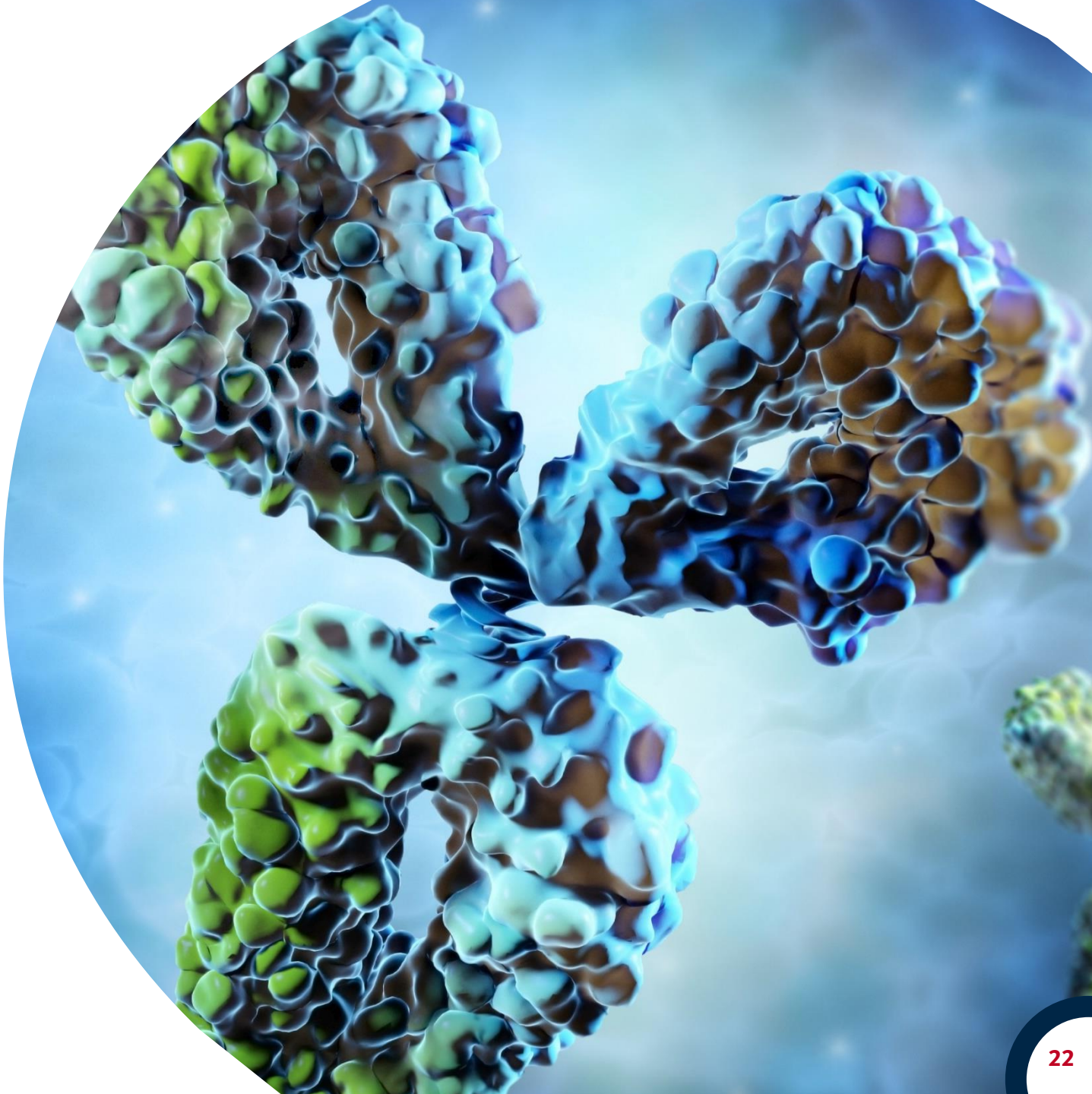
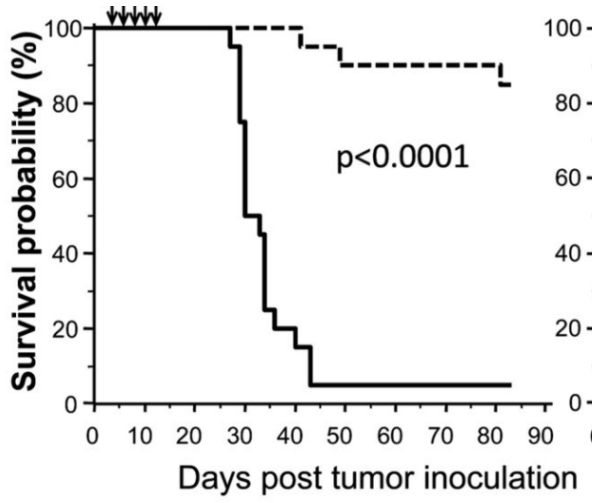
Anti-CD27 agonist mAb immunotherapy

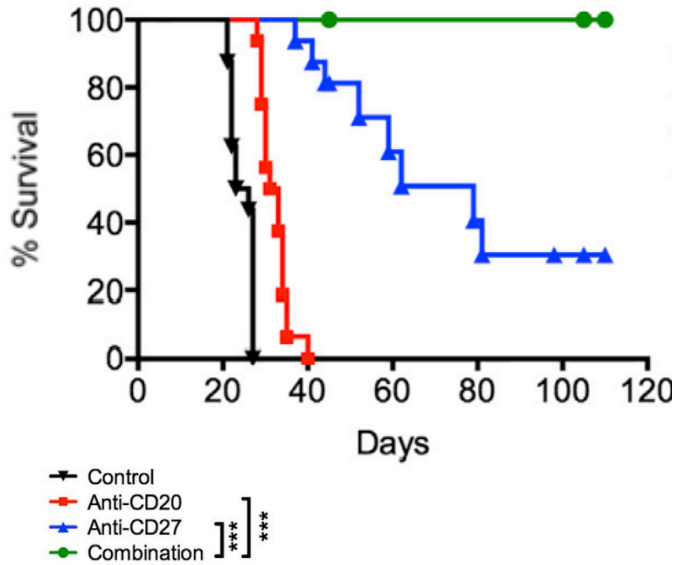


Anti-CD27 agonist antibodies can drive tumor growth inhibition as a monotherapy and in combination with CPIs

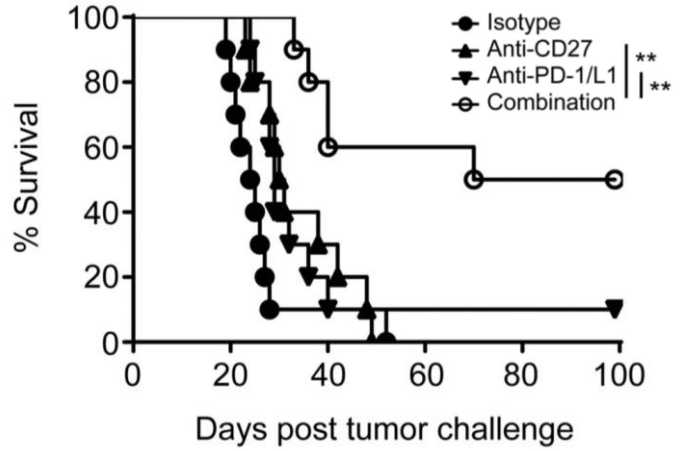
Monotherapy
CT26 Colorectal Cancer [1]



Combination Therapy
BCL-1 B cell lymphoma [2]



Combination Therapy
B16-BL6 Melanoma [3]



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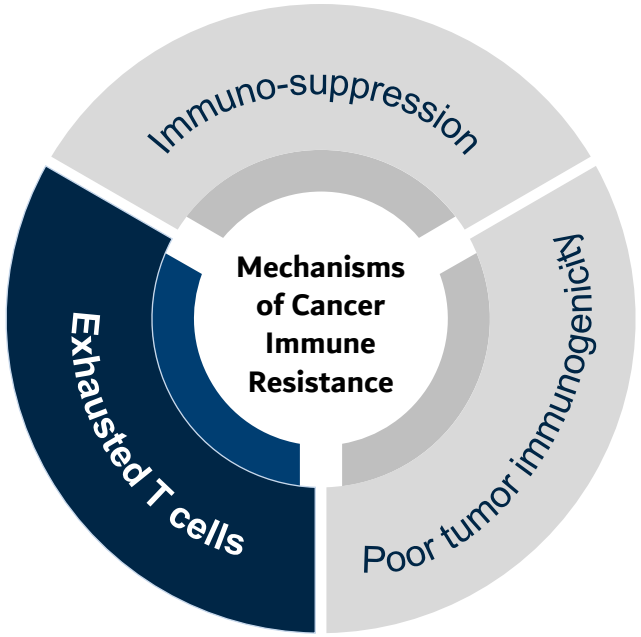
References: 1. He et al. J. Immunol 2013 2. Turaj et al. Cancer Cell 20173. Buchan et al. Clin. Cancer Research 2018

Anti-CD27 agonist to address exhausted T cell mechanism of cancer immune resistance

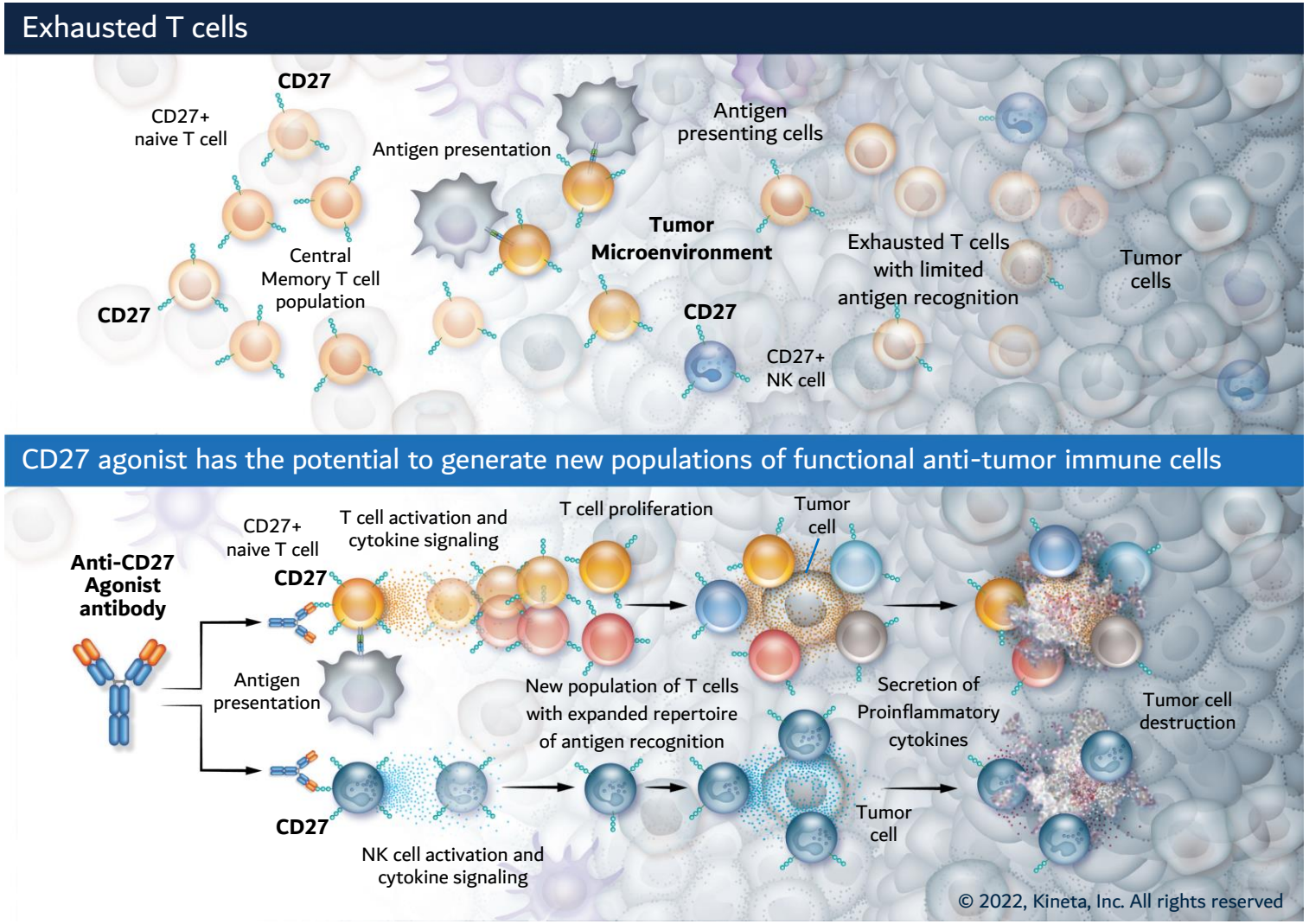


Activates and induces the maturation and migration of naïve **T cells**

Drives the **diversification of the T cell** repertoire

Enhances **NK cell** activation

Activates **low affinity antigens**



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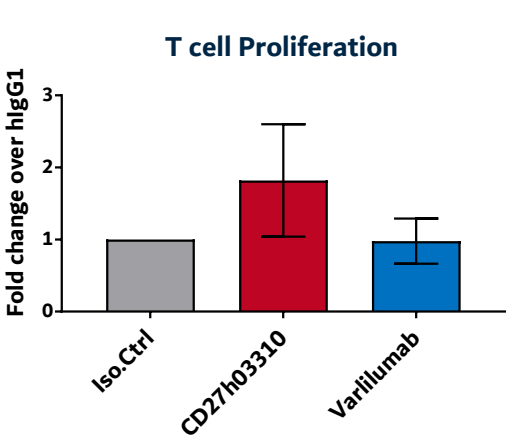
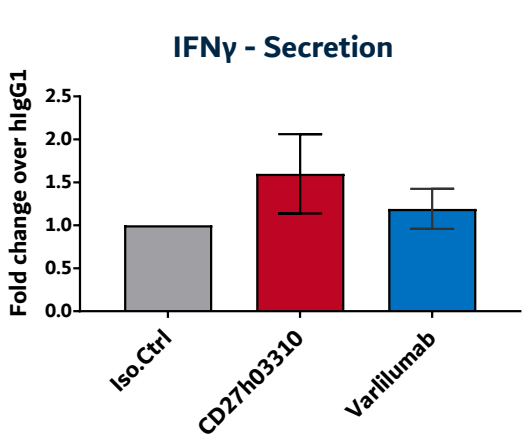
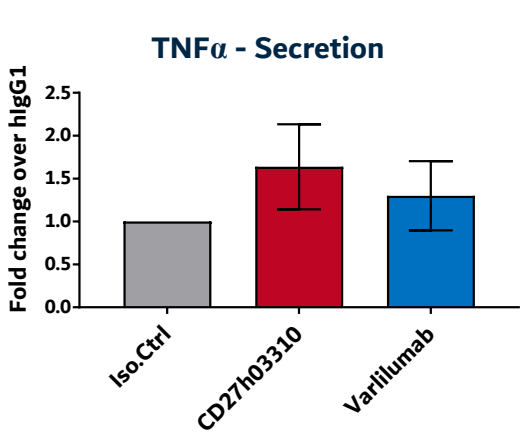
Lead anti-CD27 mAb demonstrates robust agonist activities on T and NK cells in *in vitro* studies

Increases T cell proliferation and activation

T cell

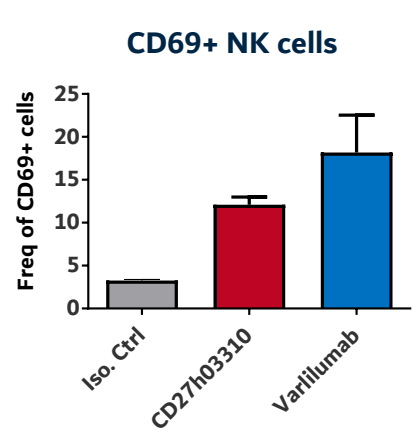






Increases NK cell activation

NK cell



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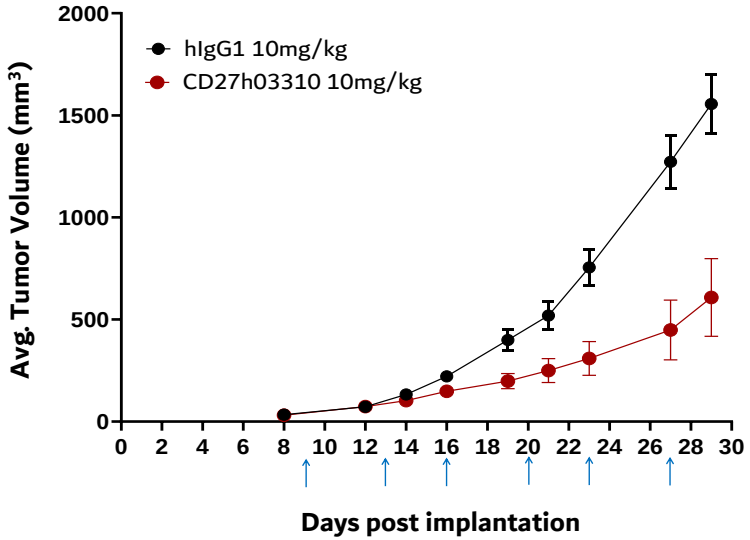
Kineta data on file

Lead anti-CD27 agonist mAb demonstrates single agent tumor growth inhibition (TGI) in preclinical models

Monotherapy

B Cell Lymphoma Model Raji
SCID mice

Mean Tumor Volume

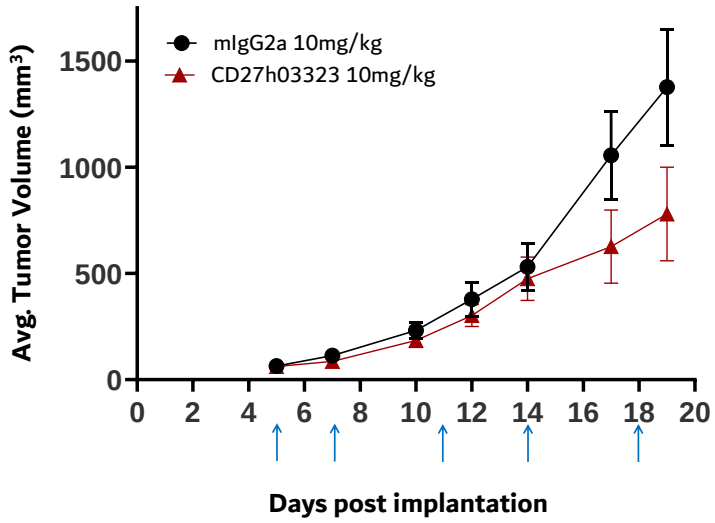


Tumor Growth Inhibition

Lead anti-CD27 mAb: **65%**

T Cell Lymphoma Model EG7
huCD27 KI mice

Mean Tumor Volume



Tumor Growth Inhibition

Lead anti-CD27 mAb: **45%**

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Significant catalysts anticipated over the next 24 months

	Anticipated Milestones	2023				2024	
		1Q	2Q	3Q	4Q	1H	2H
KVA12123	Opened Phase 1/2 clinical study	●					
	First patient dosed combination		●				
	Initial Phase 1 clinical safety data			●			
	Initial Phase 1 clinical efficacy data (ORR)				●		
	Initial Phase 2 clinical data						●
αCD27 agonist mAb	IND filing						●
	Start Phase 1 clinical study						●

Experienced leadership team

Shawn Iadonato, PhD

Chief Executive Officer

illumigen

UNIVERSITY of WASHINGTON

Craig Philips

President

Bristol Myers Squibb

BAYER

Schering-Plough

cti BIOPHARMA

Thierry Guillaudeux, PhD

Chief Scientific Officer

UNIVERSITÉ DE RENNES 1

FRED HUTCH

Keith Baker

Chief Financial Officer

TARGETED GENETICS

Deloitte & Touche

Zemax /An Ansys Company

Pauline Kenny

General Counsel

Beacon LAW ADVISORS, PLLC

Jacques Bouchy

EVP Investor Relations & Business Development

Schering-Plough

GSK

MERCK

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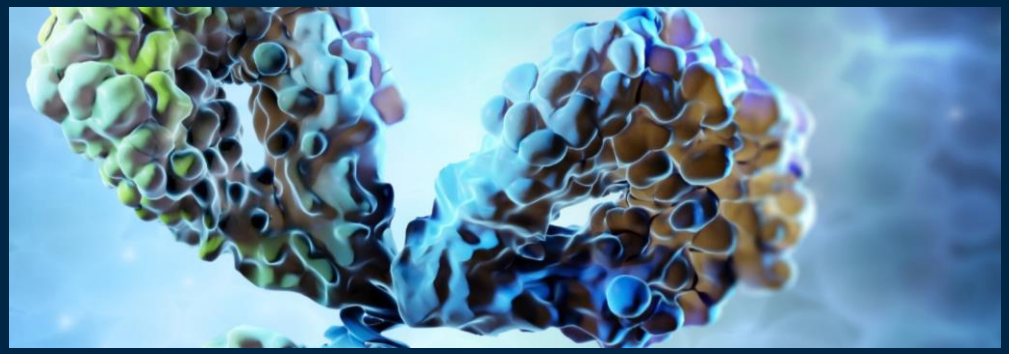
Kineta is developing next-generation immunotherapies that address cancer immune resistance



Innate Immunity Focused Pipeline	KVA12123 • VISTA blocking mAb to address immunosuppression in the TME • Opened Phase 1/2 clinical study evaluating KVA12123 alone and in combination with pembrolizumab in advanced solid tumors Preclinical Anti-CD27 agonist mAb to address exhausted T cells
Catalysts	3Q23 | KVA12123 initial clinical safety data 4Q23 | KVA12123 initial clinical efficacy data (ORR)
Runway	Through mid-2024
Partnerships	MERCK Genentech *A Member of the Roche Group* FAIR Therapeutics

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Appendix

Strategic partnerships provide potential for a significant revenue stream

	Ongoing collaboration	License Agreements with no research obligations by Kineta	
Program	**Neuromuscular diseases-ALS**	**Oncology**	**Cystic fibrosis**
Partner	MERCK	Genentech *A Member of the Roche Group*	FAIR Therapeutics
Key deal terms	Up to **$530M** in milestones Royalties on net sales Research collaboration & license agreement	Up to **$96M** in milestones Royalties on net sales	Up to **$965M** in commercial only milestones Royalties on net sales Revenue share on sub-license payments

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