



**Company presentation**  
**Per Norlén, CEO**  
Småbolagsdagen Stockholm  
13 June 2016

# Alligator Bioscience in brief

## KEY INVESTMENT HIGHLIGHTS



Pioneering development of tumor-directed agonistic antibody based immuno-oncology drugs to out-license after POC



Fast growing and developing market for immuno-oncology drugs with estimated US\$ ~30 billion potential



Well-positioned development pipeline of innovative next generation immuno-oncology drugs



Strategic partnership with Janssen worth US\$ +695 million validating Alligator's scientific leadership



Solid intellectual property portfolio



Highly experienced BoD, management and research team consisting of leading experts within immuno-oncology

## HISTORY OF ASSET GROWTH

2015

ADC-1013 entering clinical phase I and first major out-licensing deal

2013

ALLIGATOR-GOLD® antibody library

2012

Focus extended to bispecific antibodies

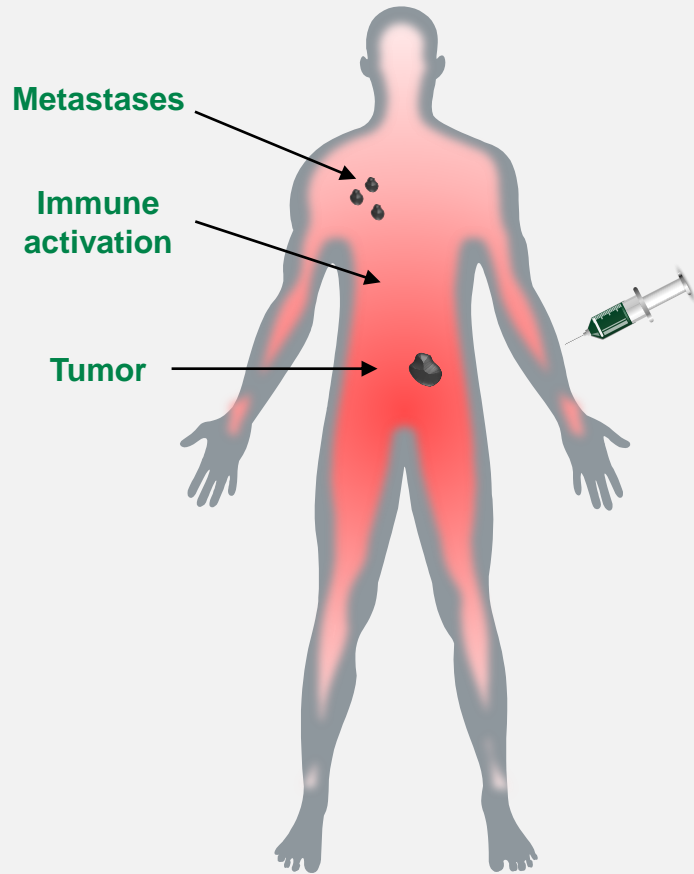
2008

Strategic focus on immuno-oncology

2001

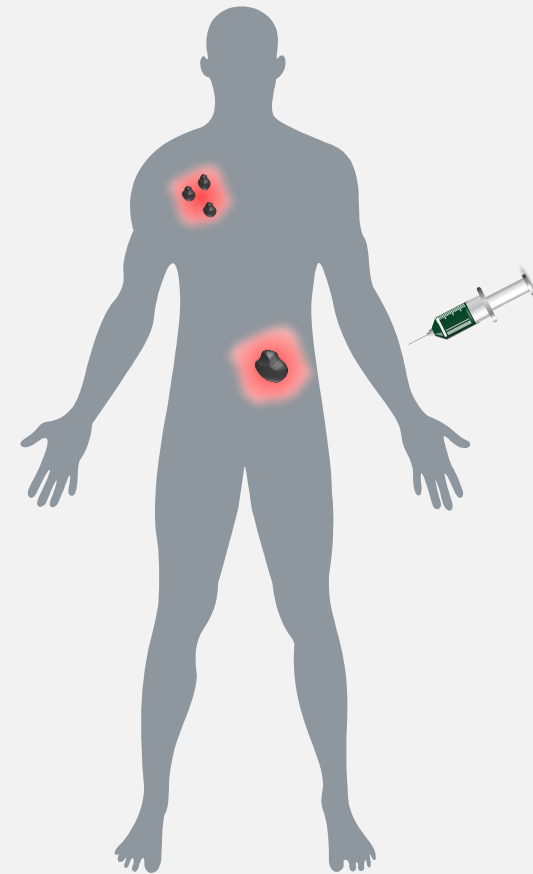
FIND® and foundation of Alligator

# Introduction to tumor-directed immuno-oncology



## SYSTEMIC IMMUNOTHERAPY

Systemic administration of immunotherapeutic drugs, for instance by intravenous injection, results in a general activation of the immune system, which may lead to severe side effects



## TUMOR-DIRECTED IMMUNOTHERAPY

Selective activation of tumor-specific immune cells. This results in an immune-mediated attack of tumors and metastases throughout the body with limited toxicity.

# Fully integrated technology platforms

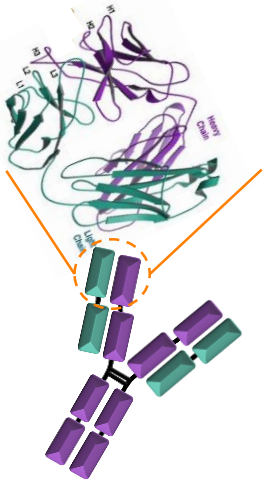
## ALLIGATOR-GOLD®

**ALLIGATOR-GOLD®** is a fully human single-chain library with large diversity

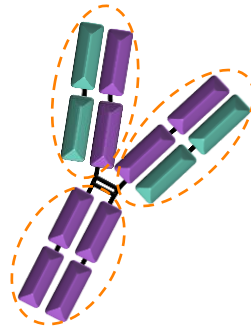
## FIND®

The **FIND®** technology is used to optimize antibody or protein characteristics

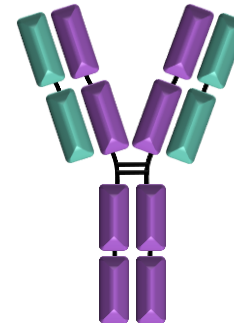
DIVERSITY > 10<sup>10</sup>



OPTIMIZATION



SUPERIOR COMPOUND











- ✓ Increased tumor retention
- ✓ Increased affinity and potency
- ✓ Improved safety profile
- ✓ Decreased antigenicity
- ✓ Improved drugability

Technology platforms will enable Alligator to continue to develop innovative antibodies for years to come

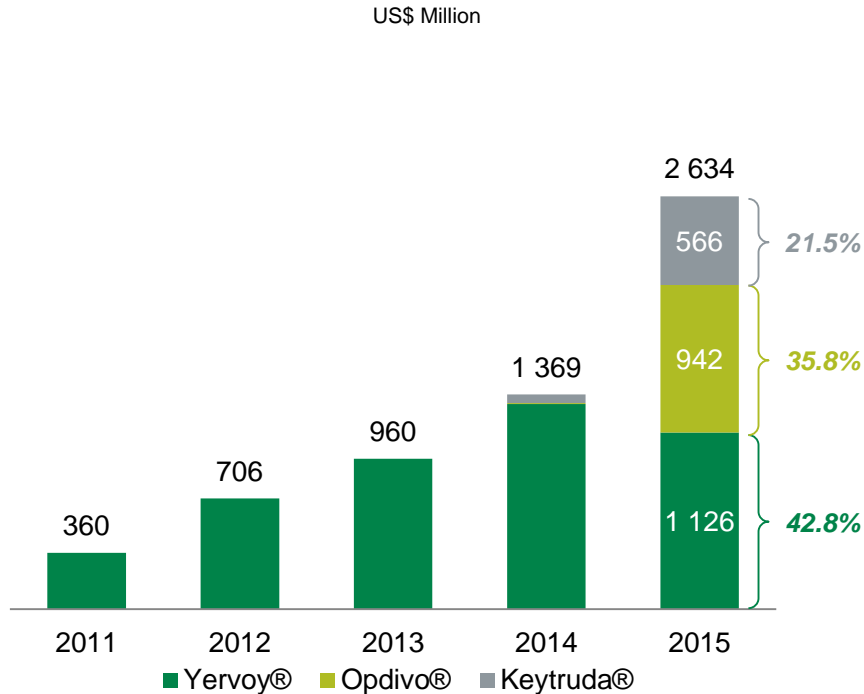
# Extensive collaboration with distinguished immuno-oncologists

## Partners and major deliverables

Stanford University	Navarra University	Lund University	Uppsala University	University of Manchester	EU/TIMCC	The Royal Institute of Technology
<ul style="list-style-type: none"> <li>Pre-clinical In-vivo proof of concept for the target combination in tumor models supporting ADC-1015 and research programs</li> </ul>	<ul style="list-style-type: none"> <li>In-vitro and in-vivo characterization of Alligator compounds supporting ADC-1016 and research programs</li> </ul>	<ul style="list-style-type: none"> <li>DC and T-cell assays used for characterization of ADC-1013</li> <li>Next generation sequencing methods for improved selection protocols</li> </ul>	<ul style="list-style-type: none"> <li>In-vivo proof of concept (ADC-1013)</li> <li>Supporting research programs</li> </ul>	<ul style="list-style-type: none"> <li>Characterization of tumor targeting antibodies supporting ADC-1016 and research programs</li> </ul>	<ul style="list-style-type: none"> <li>Academic network composed of 6 leading groups from European Universities</li> <li>Aims to characterize the tumor infiltrating myeloid cell compartment to improve cancer treatment</li> </ul>	<ul style="list-style-type: none"> <li>Identification and characterization of novel immune modulating targets</li> </ul>
<div>  <p><b>IGNACIO MELERO</b> MD, PhD, Professor</p> <p>Expert in pre-clinical and clinical tumor-directed and systemic immunotherapy</p>  </div>						
<div>  <p><b>THOMAS TÖTTERMAN</b> MD, PhD, Professor</p> <p>Pioneer in the field of tumor-directed immunotherapy</p>  </div>						
<div>  <p><b>PETER L. STERN</b> PhD, Professor</p> <p>Expert in tumor targets for cancer immunotherapy</p>  </div>						
<div>  <p><b>JEFFREY WEBER</b> MD, PhD, Professor</p> <p>Expert in clinical immuno-oncology</p>  </div>						

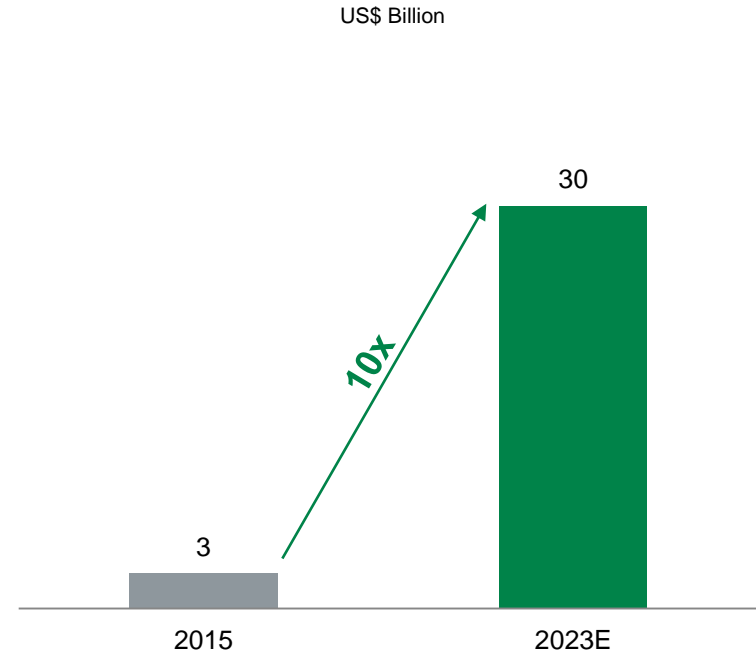
# Rapid development within the field of immuno-oncology

Sales of existing immuno-oncology treatments



Treatment costs in the US averages at ~150,000 annually per patient

Projected immuno-oncology market development



Market potential for immuno-oncology drugs estimated at US\$ ~30 billion annually

Market consensus estimates the I/O market to hold the largest upside potential within the global pharmaceutical market

# Well-positioned drug development pipeline

Development pipeline focusing on agonistic monospecific and bispecific antibodies targeting TNFR-SF

PROJECT	MOLECULE	TARGET	EARLY RESEARCH STAGE	LATE RESEARCH STAGE	PRE-CLINICAL	PHASE I	PHASE II
<b>ADC-1013</b>	Monospecific	CD40					
<b>ADC-1015</b>	Bispecific	OX40/CTLA-4					
<b>ADC-1016</b>	Bispecific	TNFR-SF + TAA					
<b>Research projects</b>	Monospecific	TNFR-SF					
<b>Research projects</b>	Bispecific	TNFR-SF + ND					

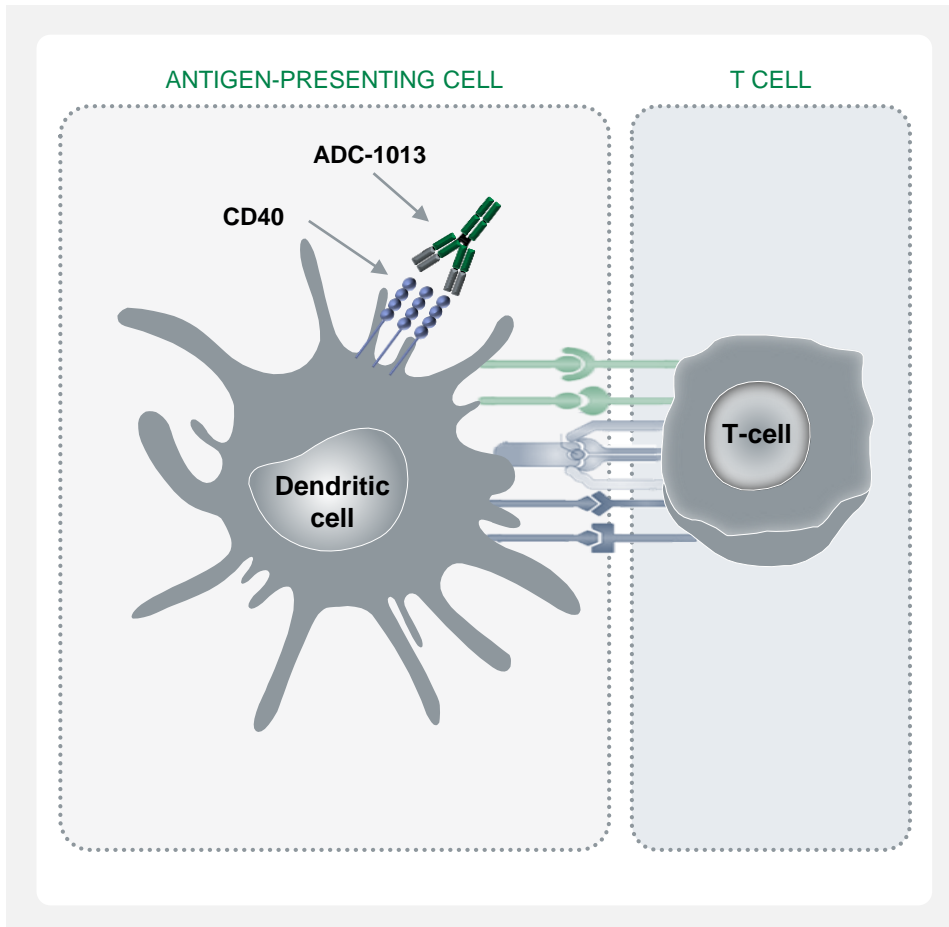
TNFR-SF: Tumor Necrosis Factor Receptor-Superfamily  
ND: Not Disclosed

All product candidates suitable for combination therapy with other I-O drugs, e.g. anti-PD-1 and anti-PD-L1

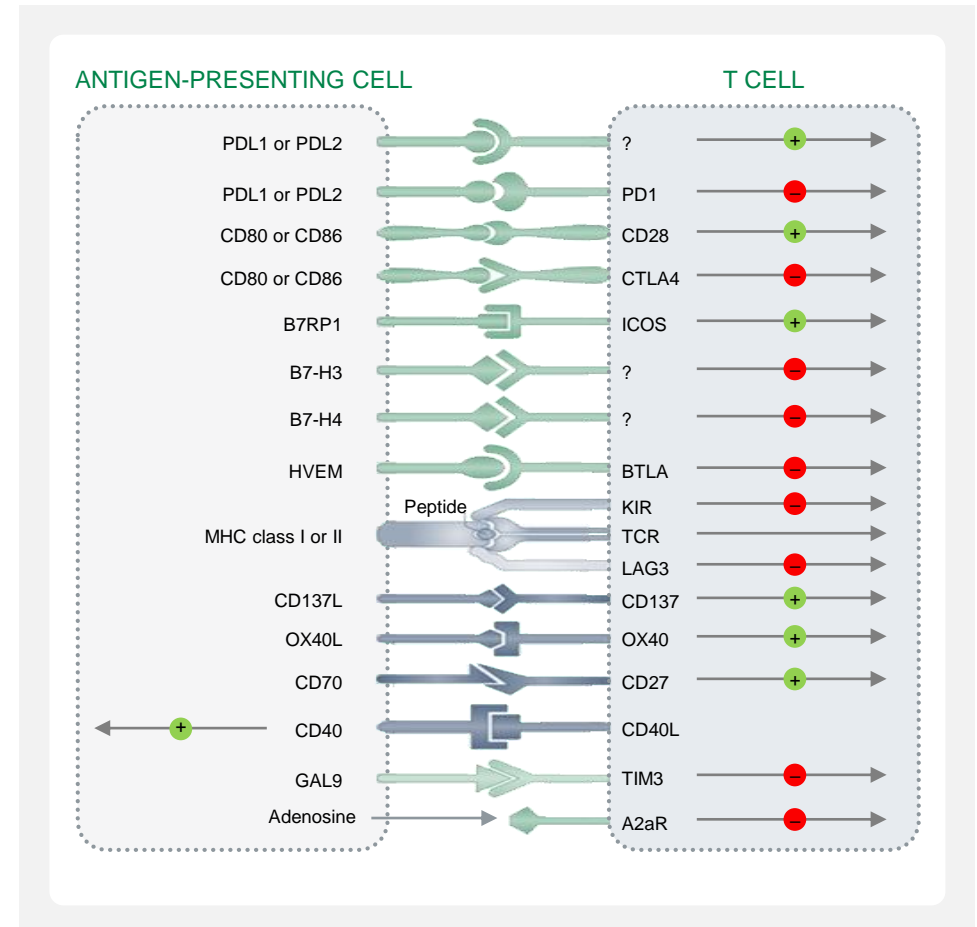


# ADC-1013: CD40 is a key immuno-oncology target

## ADC-1013 Mode of Action



## Co-stimulating receptors



CD40 is the only defined receptor that selectively activates the antigen-presenting cell and is a highly promising target for combination with T-cell activating antibodies such as PD-1 and CTLA-4



# ADC-1013: One of only four CD40 projects in clinical phase

## Selection of antibody based immuno-oncology drugs in clinical development

Company	Drug	Indication	Phase	Target
Roche (Genentech)	atezolizumab	NSCLC, bladder, renal, breast	III	PD-L1
AstraZeneca (MedImmune)	durvalumab	NSCLC, H&N, bladder	III	PD-L1
Pfizer & AstraZeneca	tremelimumab	Mesothelioma, NSCLC, bladder	III	CTLA-4
Pfizer & MerckSerono	avelumab	NSCLC, GI, bladder	III	PD-L1
Prima Biomed (Immutep)	IMP-321	Breast	III	LAG3
CureTech	pidilizumab	BCL, NHL, melanoma, CRC	II	PD-1
Novartis	PDR-001	NSCLC, CRC, GI, melanoma	II	PD-1
Jiangsu Hengrui Medicine (Incyte)	INC5HR-1210	Solid tumors	II	PD-1
AstraZeneca (MedImmune)	MEDI-0680	BCL, NHL, melanoma, CRC	II	PD-1
AgonOx (AstraZeneca)	MEDI-6469	Breast, prostate, lymphoma	II	OX40
Bristol-Myers Squibb	urelumab	Solid tumors and lymphoma	II	CD137
Novartis	LAG-525	Solid tumors	II	LAG3
Bristol-Myers Squibb	BMS-986156	Solid tumors	II	GITR
Celldex	varlilumab	Solid tumors	II	CD27
<b>Alligator Bioscience</b>	<b>ADC-1013</b>	<b>Solid tumors</b>	<b>I</b>	<b>CD40</b>
Apexigen	APX-005M	Lymphoma	I	CD40
Roche	RG-7876	Solid tumors	I	CD40
Seattle Genetics	SEA-CD40	Solid tumors	I	CD40
Bristol-Myers Squibb	BMS-986016	Solid tumors, lymphoma and leukemia	I	LAG3
Novartis (Immutep)	IMP-701	Cancer	I	LAG3
Pfizer	PFE-1, PF-05082566	Solid tumors and lymphoma	I	CD137
Merck	MK-4166	Solid tumors	I	GITR
AstraZeneca	MEDI-1873	Solid tumors	I	GITR
GITR Inc	TRX-518	Solid tumors and melanoma	I	GITR
AstraZeneca	MEDI-6383	Solid tumors	I	OX40
Roche	MOXR-0916	Cancer	I	OX40
AstraZeneca	MEDI-0562	Cancer	I	OX40
GlaxoSmithKline	GSK-3174998	Cancer	I	OX40
Pfizer	PF-04518600	Cancer	I	OX40
Bristol-Myers Squibb	MDX-1105	Solid tumors	I	PD-L1
Regeneron	REGN-2810	Solid tumors, BCL	I	PD-1
BeiGene	BGB-A317	Cancer	I	PD-1
GlaxoSmithKline (Amplimmune)	AMP-224	Cancer	I	PD-1

Source: Company information

## Comments

- Approx. 70 immuno-oncology drugs are currently in clinical development
- Extensive focus on first generation targets PD-1, CTLA-4 and PD-L1
- Four ongoing trials by commercial companies targeting the CD40 receptor, including Alligator's ADC-1013

# ADC-1013: Partnership with Janssen validating Alligator's model

## Partnership details for ADC-1013



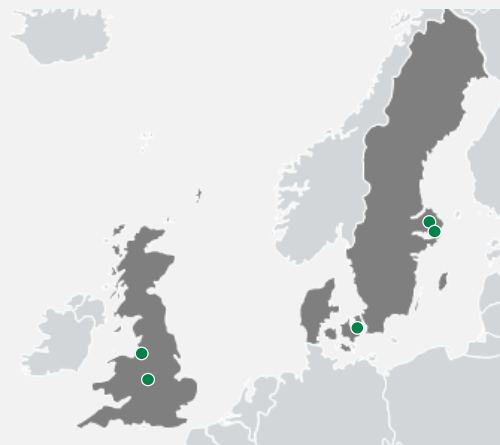
### Description of agreement

- Exclusive world-wide license to develop and commercialize ADC-1013
- Alligator continues as sponsor for the ongoing Phase I clinical trial including planned extension
- Future studies to be sponsored by Janssen

### Royalty / Milestone potential

- Up-front payment plus additional milestones up to a potential total of US\$695 million
- Tiered royalties on worldwide net sales upon successful launch

## Description of ongoing Phase I trial



- ➔ 40 patients with advanced solid tumors
- ➔ 5 clinical sites in the UK, DK and SE



### Dosing & administration

- FiH, first dose April 2015
- Dose escalation
- Intra-tumoral

### Primary endpoint

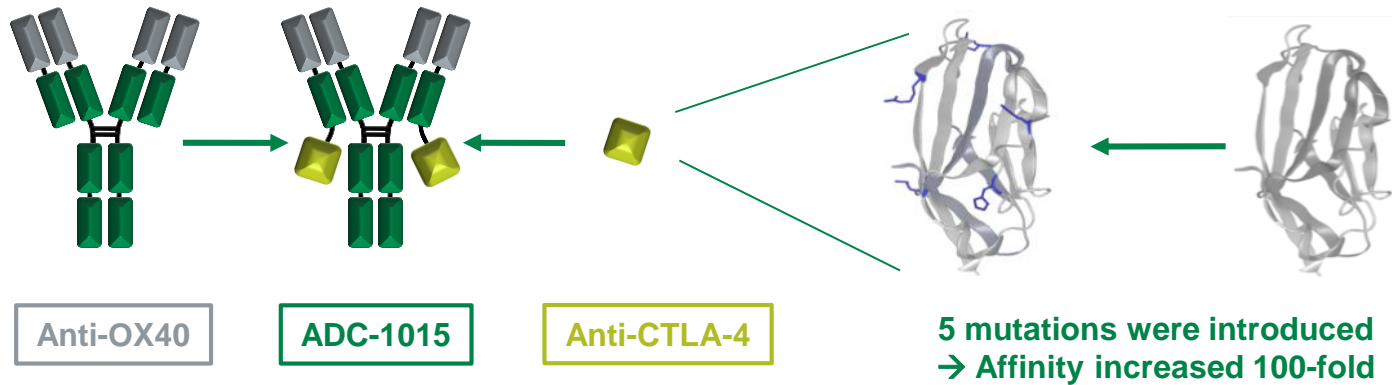
- Safety and tolerability

### Secondary endpoints

- Pharmacokinetics
- Immunogenicity
- Clinical efficacy

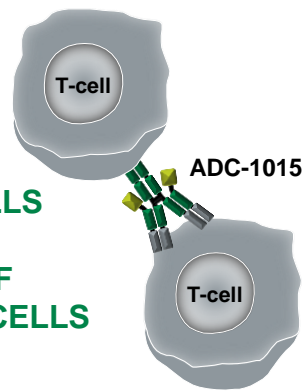
Highly attractive out-licensing terms with Janssen showing commitment through extension of clinical scope to systemic administration

# ADC-1015: Biological rationale for dual binding OX40 and CTLA-4

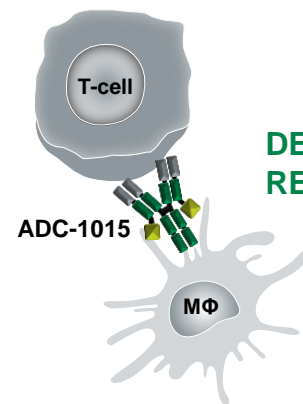


- **ACTIVATION OF EFFECTOR T-CELLS**

- **SUPPRESSION OF REGULATORY T-CELLS**

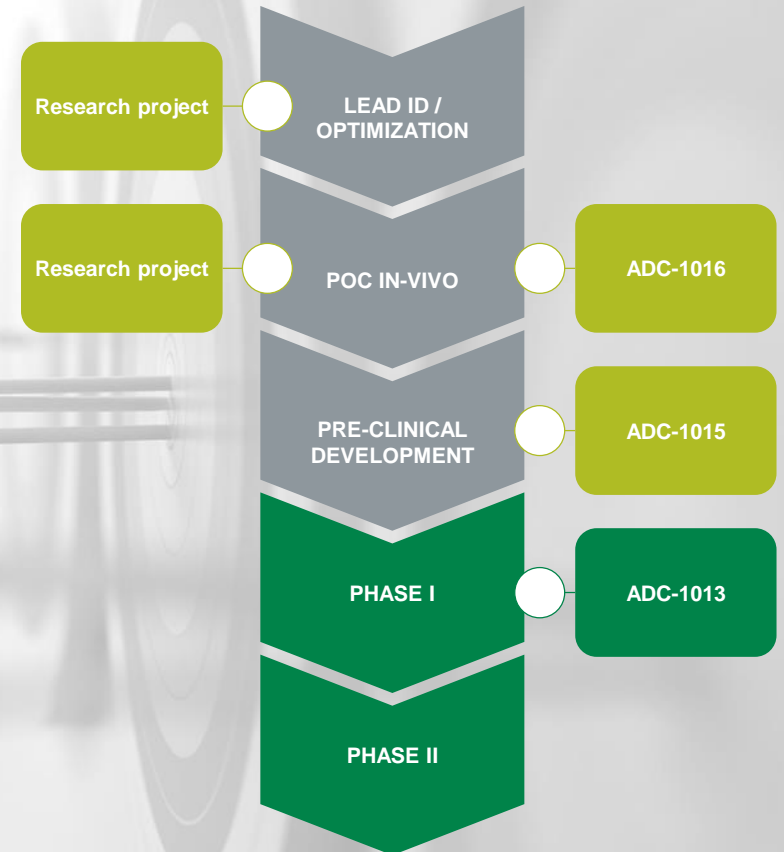


**DEPLETION OF REGULATORY T-CELLS**



# Company strategy

1. **Advance and broaden pipeline** of agonistic tumor-directed bispecific immune activating product candidates
2. **Extend in-house product development** to late-stage clinical phase before entering into strategic partnerships
3. **Development of next generation technology** for antibody discovery and optimization
4. **Facilitate an attractive research environment** for intellectual human capital and increase research collaborations





**Thank You!**