



***Breakthrough antibody  
technology to broaden therapeutic  
window of anti-cancer drugs***

**April 2021**

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## The Company

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### Technology

- Proprietary CAB technology creates antibodies that conditionally and reversibly bind to tumors, but not normal cells, enabling increased antibody potency and reduced toxicity
- Strong intellectual property rights- Over 500 patents (257 issued, 9 allowed, and 239 pending)

### Clinical and Team

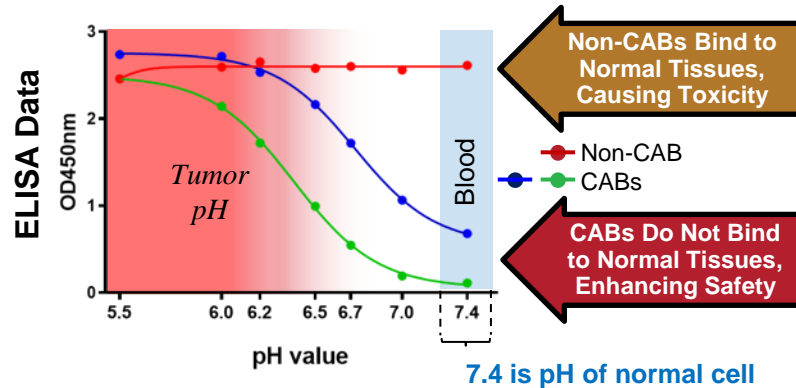
- Clinical stage company with two first-in-class P2 CAB antibodies for multiple indications and one partnered CAB antibody entering P1 clinical studies
- 60 employees and contractors with exceptional experience in innovative research and clinical development

### Finance and Infrastructure

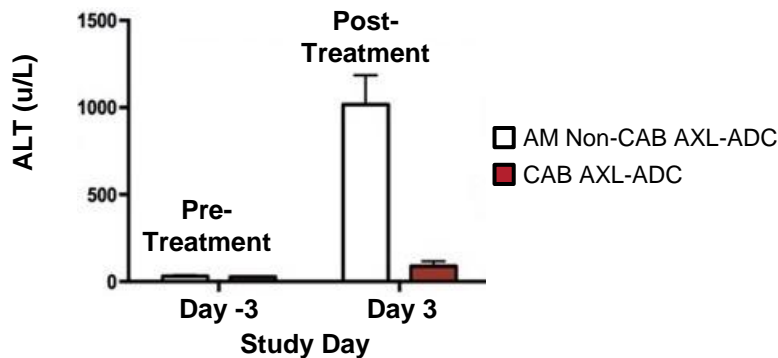
- Launched successful IPO on December 16<sup>th</sup> raising over \$217 MM in gross proceeds with \$383 million raised to date
- Committed BeiGene collaboration with \$25 million received to date, and eligible to receive up to \$225.5 million in future milestone payments
- Headquartered in San Diego in a ~43,000 square foot office and lab facility with a contract lab in Beijing

# CABs Bind Selectively and Reversibly Based on the TME, Enhancing Exposure and Reducing Toxicity

## CABs Bind Selectively in the Lower pH TME



## Reduced Toxicity in Non-human Primates



- CAB ADC resulted in minimal increase in ALT, supporting that on-target, off-tumor toxicity is reduced with the CAB ADC

## CABs Widen Therapeutic Index

- Eliminates or reduces off-tumor tox
- Avoid TMDD, improves pharmacokinetics (PK)
- Only CDR modification, reducing immunogenicity
- Efficient development and manufacturing
- Expands target universe
- Increased safety and potency
- Reversible activation via Protein-associated Chemical Switches (PaCS) (responsive to H<sup>+</sup>)

**Unlike prodrugs, CABs are reversible, enhancing the therapeutic index**

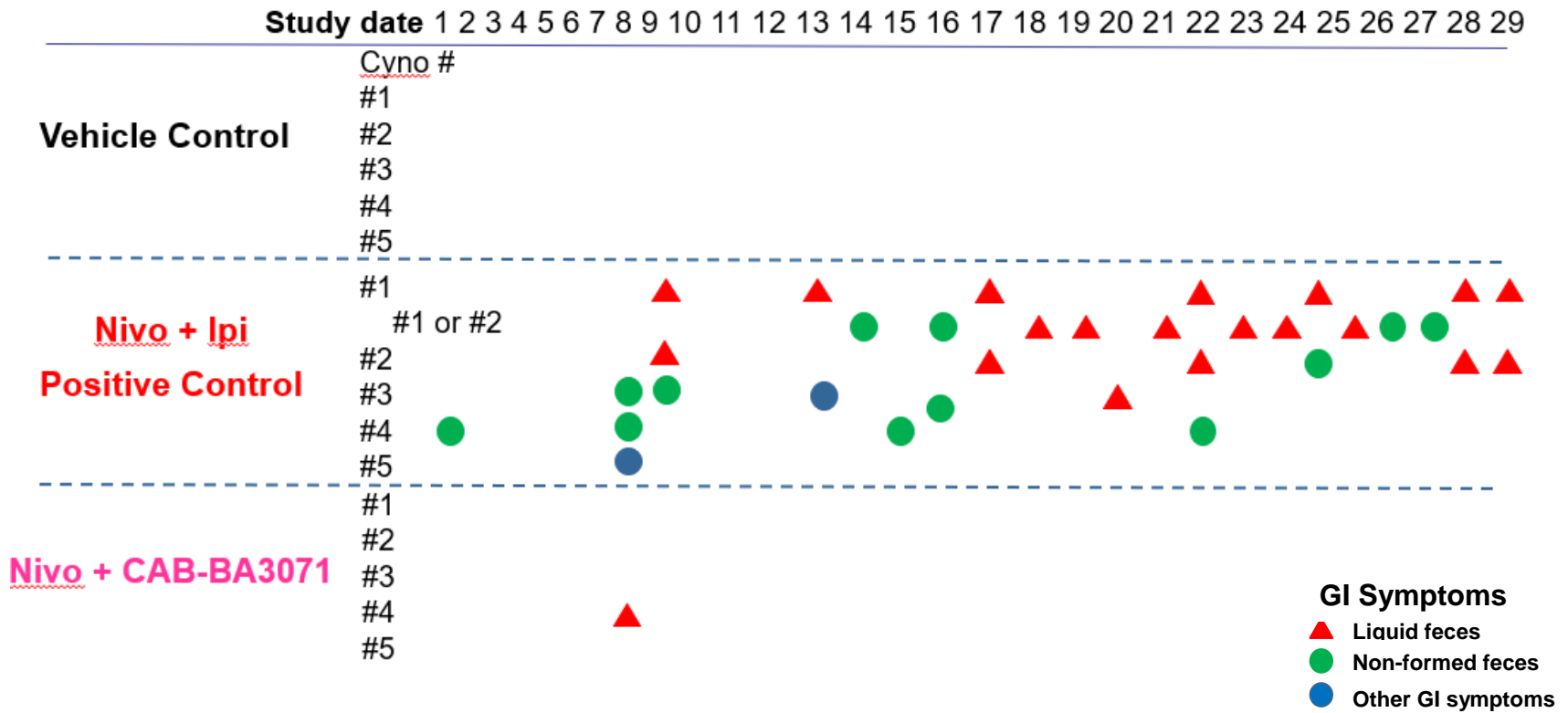
Note: Data above based on non-human primate studies; OD450nm = optical density measurements using a microplate reader with a 450nm filter; TME = Tumor Microenvironment; AM = affinity matched; CDR = Complementarity-determining regions; TMDD = Tissue Mediated Drug Deposition; ALT or alanine aminotransferase elevation is a sign of liver toxicity

# Reduced Toxicity Observed In Non-Human Primate Study With CAB-CTLA4 in Combination With Nivolumab

Once weekly for four weeks exposure to Nivolumab + ipilimumab or CAB CTLA4

Nivolumab: 20mg/kg QW (12x human dose)

Ipilimumab or CAB-CTLA4: 15mg/kg QW (45-60x human dose)



# Robust Pipeline of Antibody-Based Therapeutics

Type	CAB Program	Target	Indications	Discovery	IND Enabling	Phase 1	Phase 2	Phase 3	Expected Upcoming Milestones
ADC	BA3011 (AXL-ADC)	AXL Positive	STS & Bone Sarcoma, NSCLC, Ovarian Cancer* (Mono & Combo w/ PD-1)						<ul style="list-style-type: none"> <li>Ph2 interim data 2021</li> <li>Ph2 registration data 2022</li> </ul>
	BA3021 (ROR2-ADC)	ROR2 Positive	NSCLC, Melanoma, Ovarian Cancer* (Mono & Combo w/ PD-1)						<ul style="list-style-type: none"> <li>Ph2 interim data 2021</li> <li>Ph2 registration data 2022</li> </ul>
CTLA-4	BA3071 (CTLA-4)	CTLA-4	RCC, NSCLC, SCLC, HCC, Melanoma, Bladder, Gastric, Cervical Cancer (Mono & Combo w/ PD-1)						<ul style="list-style-type: none"> <li>Ph1 dose escalation trial to be initiated in 2021</li> <li>Ph1 data in 2021 or early 2022</li> </ul>
Bispecific	BA3182 (Bispecific)	EpCAM / CD3	NSCLC, SCLC, Colorectal, Ovarian, TNBC, Prostate Cancer**						<ul style="list-style-type: none"> <li>US IND in 1H 2022</li> </ul>
	BA3142 (Bispecific)	B7-H3 / CD3	NSCLC, SCLC, HNC, Melanoma, Sarcoma, Pancreatic, Prostate Cancer**						<ul style="list-style-type: none"> <li>US IND in 2022</li> </ul>
	EGFR (Bispecific)	EGFR / CD3	NSCLC, HNC, Pancreatic, TNBC, Colorectal Cancer**						<ul style="list-style-type: none"> <li>US IND potential in 2022</li> </ul>
	Nectin-4 (Bispecific and/or ADC)	Nectin-4 / CD3	Bladder, TNBC, Pancreatic Cancer**						<ul style="list-style-type: none"> <li>US IND potential in 2022</li> </ul>

Abbreviations: STS = Soft Tissue Sarcoma, NSCLC = Non-small Cell Lung Cancer, RCC = Renal Cell Carcinoma, SCLC = Small Cell Lung Cancer, HCC = Hepatocellular Carcinoma, TNBC = Triple-Negative Breast Cancer, HNC = Head and Neck Cancer; \* Ph2 investigator-initiated trial for Ovarian Cancer expected to be initiated by the end of 2020 or early 2021

\*\* Anticipated indications based upon tumor target expression

## Disease Progression

1

**AXL's higher expression associated with disease progression in several indications, including:**

- Sarcoma\*, NSCLC, ovarian cancer, breast cancer, pancreatic cancer, glioblastoma, melanoma, RCC, prostate cancer, and esophageal cancer

## Tumor Resistance

2

**AXL expression associated with tumor resistance to:**

- Chemotherapy, PD-1/L1 inhibitors, molecular targeted therapy (EGFR), and radiation therapy

## Clinical Validation

3

**AXL has been clinically validated as a target:**

- Multiple assets in the clinic including non-specific small molecules and antibody ADCs
- Some anti-AXL antibodies in the clinic have shown encouraging signs of antitumor activity; however, adverse events may limit clinical utility and/or potency

## Initial US Addressable Patient Population

Tumor type	Patient treatment phase	Est. corresponding US patient population	Est. AXL positivity rate <sup>1</sup>	Est. US target population at launch
Sarcoma (STS* & Bone)	Stage III/IV	10,000 – 15,000	50%	5,000 – 7,500
NSCLC	Stage III/IV (PD-1/L1 experienced)	66,000 <sup>2</sup>	30%	15,000
Ovarian Cancer	Stage III/IV Platinum resistant	12,000	30 – 40%	4,000

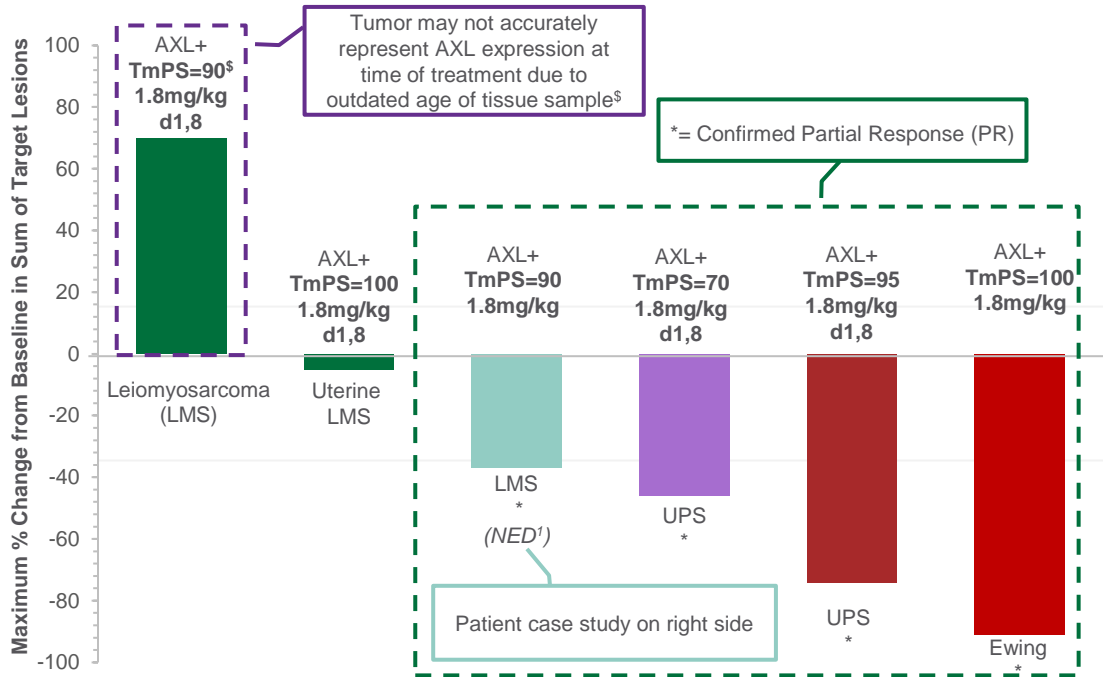
Source: BioAtla IHC assay validation results & phase 1 AXL testing data, GlobalData-Opportunity Analysis and Forecasts, SEER database

<sup>1</sup>Based on TmPS (Tumor membrane Percent Score) <sup>2</sup>75% of these patients generally switch to a new therapy

\* Orphan drug designation for BA3011 for treatment of soft tissue sarcoma was granted on March 1<sup>st</sup>, 2021 by the Office of Orphan Drug Products (OOPD) at FDA

# BA3011: Encouraging Results at 1.8mg/kg in AXL High (TmPS ≥70) Sarcoma\* Patients

## Sarcoma\* (confirmed TmPS\*\* ≥70; 1.8mg/kg Q3W or 2Q3W)



**4 partial responses out of 6 for sarcoma patients with TmPS ≥70 at optimal dosing levels**

Notes:

\*Orphan drug designation for BA3011 for treatment of soft tissue sarcoma was granted on March 1st, 2021 by the Office of Orphan Drug Products (OOPD) at FDA

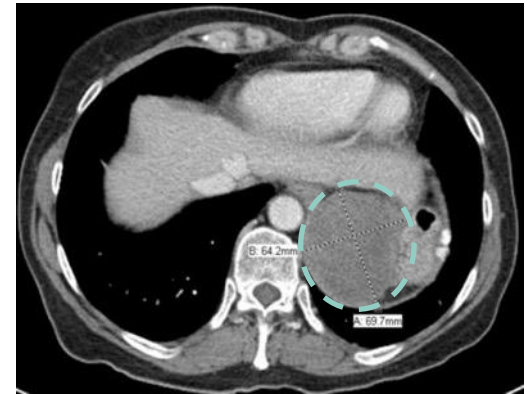
\*\*AXL Tumor membrane Percent Score or TmPS = % Score ≥1+

§Tissue biopsy from resection, over 1 year old prior to trial entry

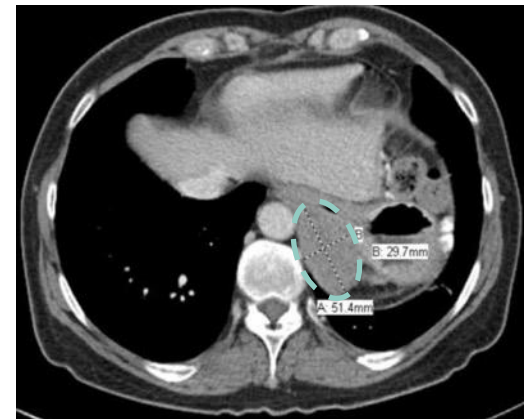
All patients: Multiple cycles of antineoplastic agents received prior to starting treatment with BA3011

<sup>1</sup>NED = No evidence of disease; study is on-going as of April 1, 2020

## LMS Patient Case Study



Pre-treatment



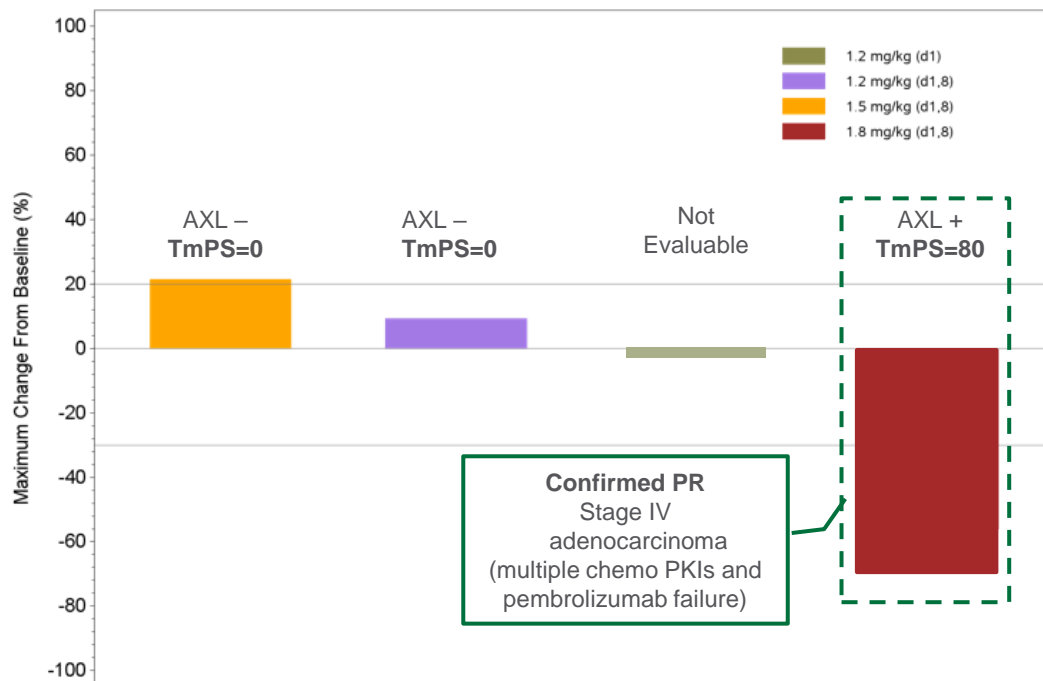
Post-treatment, week 18 Scan

- 37% tumor reduction
- Tumor mass reduced enough to enable successful surgical resection resulting in NED<sup>1</sup>



# BA3011: Encouraging Results in NSCLC AXL High (TmPS $\geq 70$ ) Patient at 1.8mg/kg

## NSCLC (All Patients)



## Stage IV adenocarcinoma patient case study

- Patient experienced multiple failures of prior treatments
- Prior treatment with PD-1 inhibitor (pembrolizumab) failed
- ~70% tumor reduction after BA3011 dosed at 1.8 mg/kg 2Q3W

**Out of 4 NSCLC patients, partial response achieved in the one patient with TmPS  $\geq 70$**

Note: All patients: Multiple cycles of antineoplastic agents received prior to starting treatment with BA3011

## ROR2 Over-expression

1

Over-expressed across many solid tumors, including NSCLC, melanoma, ovarian, TNBC, and HNC

## Enhanced ROR2 Expression

2

Enhanced ROR2 expression with prior PD-1/L1 treatment

## Nascent Competition

3

No other ROR2 ADC or small molecules in the clinic yet, but competition is emerging

## Initial US Addressable Patient Population

Tumor type	Patient treatment phase	Est. corresponding US patient population	Est. ROR2 positivity rate <sup>1</sup>	Est. US target population at launch
NSCLC	Stage III/IV (PD-1/L1 inhibitor)	66,000 <sup>2</sup>	30%	15,000
Melanoma	Immune checkpoint inhibitor	25,000 <sup>2</sup>	20 – 30%	5,000
Ovarian Cancer	Stage III/IV Platinum resistant	12,000	30 – 40%	4,000

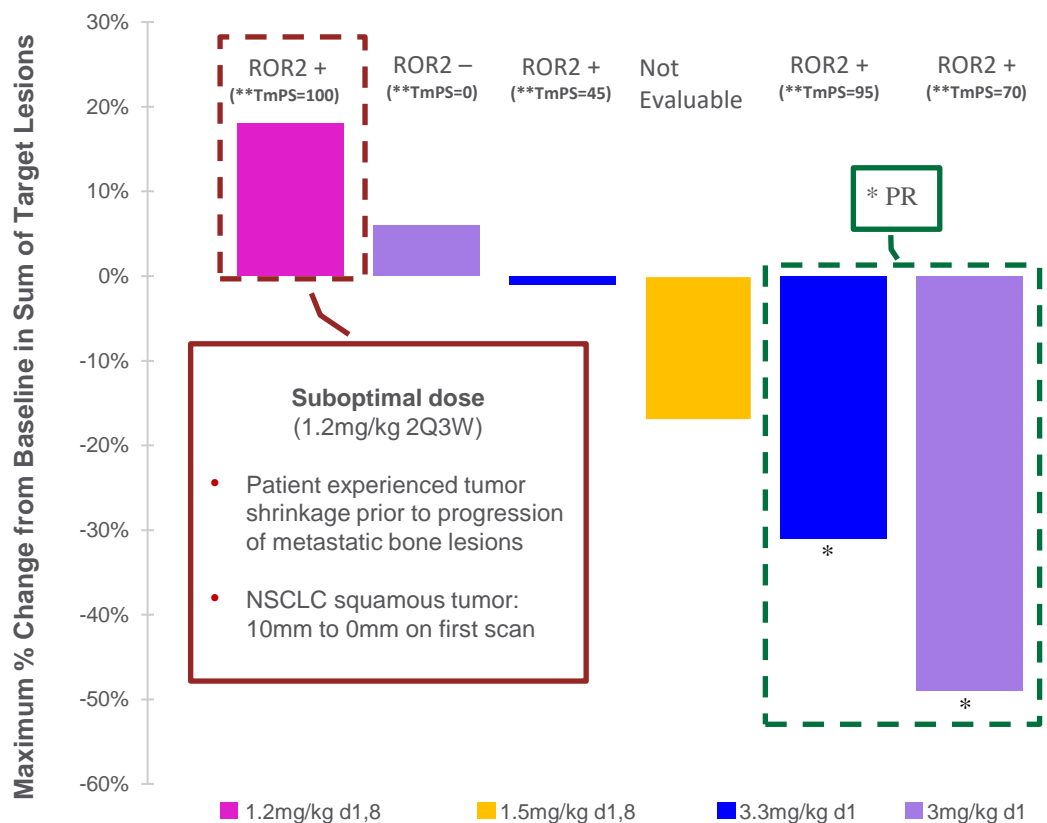
Source: BioAtla IHC assay validation results & phase 1 AXL testing data, GlobalData-Opportunity Analysis and Forecasts, SEER database;

<sup>1</sup>Based on TmPS (Tumor membrane Percent Score) <sup>2</sup>75% of these patients generally switch to a new therapy

# BA3021: Encouraging Results in Stage IV PD-1 Refractory NSCLC Patients

## All evaluable NSCLC patients enrolled in BA3021 Phase 1 trial

## Clinical results show promise in refractory patients



**1** All NSCLC patients who enrolled in this trial had previously been treated with PD-1 therapy

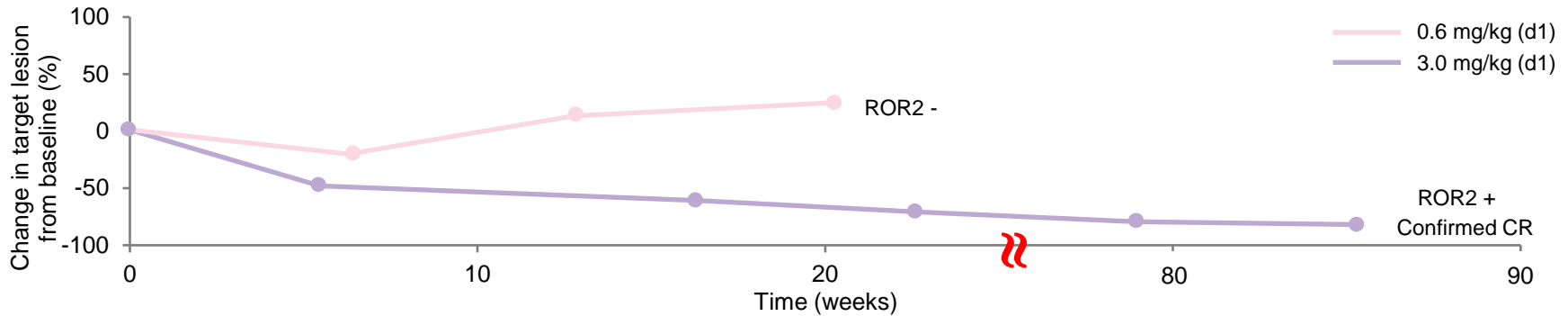
**2** ROR2 expression strongly correlates with anti-tumor response

Note: Not Evaluable (Strong, extensive fibroblastic stromal positivity reported)

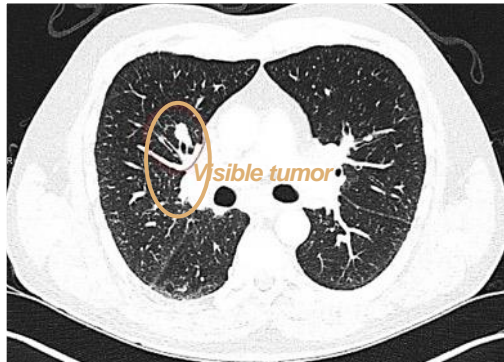
\*\*TmPS= Tumor membrane Percent Score- Tumor membrane target expression calculated by summing the percentages of intensities at either  $\geq 1+$ ,  $\geq 2+$  or  $\geq 3+$ . Scores range from 0 to 100.

# BA3021: Encouraging Results in Stage IV PD-1 Refractory Melanoma and Head and Neck Cancer Patients

## All evaluable metastatic melanoma patients enrolled in BA3021 Phase 1 trial by ROR2 TmPS



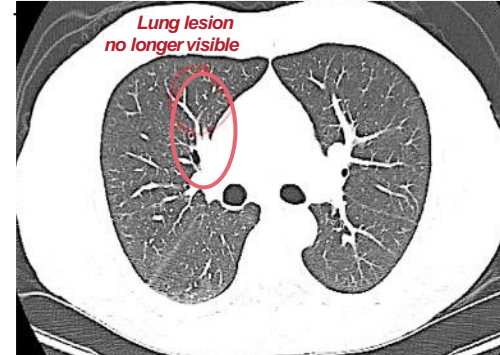
- One of two melanoma patients enrolled in the BA3021 Phase 1 dose escalation trial achieved a **Complete Response (CR; Purple line)**
- **Patient with CR** experienced failure of both nivolumab & nivolumab + ipilimumab; now continuing BA3021 ~ 2 yr, consistent with results below



**Pre-treatment CT scan**

Pre-treatment posterior occipital lymph node biopsy:  
**Active melanoma**

“Biopsy: consistent with metastatic melanoma... consists of fibrous stroma and a relatively **pure population of malignant melanoma cells...**”



**On-treatment; Week 6 Scan**

On-treatment posterior occipital lymph node biopsy:  
**No melanoma detected**

“Final pathology results: dense fibrous connective tissue with abundant melanin-laden macrophages, **no melanoma seen...**”

**Head and neck squamous cell carcinoma (HNSCC):** One PR (-54%) observed out of one HNSCC cancer patient treated; ROR2 positive; Refractory to 4 prior lines of therapy incl. cetuximab, pembrolizumab

## Overview of adverse events in on-going Phase 1 & 2 trials

### AEs consistent with MMAE-based toxicity, including:

- reversible myelosuppression
- transient liver enzyme elevation
- metabolic disturbances

Few related SAEs

Few related AEs leading to treatment discontinuation

**BA3011 (CAB AXL-ADC)**  
(all patients n=64;  
1.8mg/kg 2Q3W n=25)

No clinically meaningful on-target toxicity observed despite high exposure

### Constipation

- Grade 1-2 (26%)\*
- Grade 3 (3%)\*

Constipation is believed to be an on-target mediated effect

Differentiated profile due to advantageous pharmacokinetic characteristics of CAB ADC

### Peripheral Neuropathy & Diarrhea

- PN rates (28%) (All Grade 1-2)\*
- Diarrhea rates (19% Grade 1-2; 3% grade 3)\*

Patients administered 1.8mg/kg Q3W, Q2W, or 2Q3W (d1,8)  
(safety population Phase 1 & 2)

Characteristic	BA3011 (N=38)	BA3021 (N=10)
Any Adverse Events (AEs)	38 ( 100%)	7 (100%)
Related AEs with CTCAE <sup>1</sup> Grade 3 or 4 <sup>2</sup>	15 ( 39%)	4 (40%)
Any related serious AEs <sup>2</sup>	4 ( 11%)	2 (20%)
Related AEs leading to death <sup>2</sup>	0	0
Related AEs leading to treatment discontinuation <sup>2</sup>	2 (5%) <sup>§§</sup>	0

<sup>§§</sup>Grade 2 fatigue and peripheral neuropathy at 1.8mg/kg 2Q3W

Notes:

\*All AEs; Treatment related constipation: Grade 1-2 (9%), G3-4 (0%); Treatment related PN Grade1-2 (25%), Grade3-4 (0%); Treatment related Diarrhea Grade 1-2 (14%), G3-4 (0%)

<sup>1</sup>CTCAE: Common Terminology Criteria for Adverse Events. The NCI Common Terminology Criteria for Adverse Events is a descriptive terminology which is utilized for Adverse Event (AE) reporting. A grading (severity) scale is provided for each AE term. <sup>2</sup>As assessed by the investigator. Missing responses are counted as related.

# Potentially Registration-Enabling Phase 2 Trials

## CAB AXL-ADC (BA3011)



**Sarcoma (STS<sup>#</sup> & Bone)**  
mono & combo with PD-1; AXL TmPS\* $\geq$ 50 ;  
3<sup>rd</sup> Line (n=200-275)

Interim analysis

Data read-out



**NSCLC**  
mono & combo with PD-1; AXL TmPS\* $\geq$ 50  
in PD-1 refractory patients (n=40)

Proof Of Concept read-out

Ovarian Investigator-Initiated Trial (IIT) not shown

2020

2021

2022

## CAB ROR2-ADC (BA3021)



**NSCLC**  
mono & combination w PD-1  
ROR2 TmPS\* $\geq$ 50 ; PD1-refractory patients (n=200)



**Melanoma**  
mono & combination w PD-1  
ROR2 TmPS\* $\geq$ 50 ; PD1-refractory patients (n=200)

Interim analysis

Data read-out

Ovarian Investigator-Initiated Trial (IIT) not shown

Note: <sup>#</sup> STS= Soft Tissue Sarcoma; \*TmPS= Tumor membrane Percent Score- Scores range from 0 to 100

## Opportunity exists for a “safer” CTLA-4 inhibitor

- Traditional combination of anti-PD-1 and anti-CTLA-4 checkpoint inhibitor led to **improved outcomes**
- Combination associated with increase in **adverse events** and **treatment discontinuations**
- A safe combo of PD-1/CTLA-4 has **potential** across many immunogenic tumors

Clinical Endpoint	Nivolumab (PD-1) <sup>1</sup>	Nivolumab + Ipilimumab <sup>1</sup>
Progression Free Survival	6.9 months	11.5 months
Grade 3 or 4 Adverse Events	16.3%	<b>55.0%</b>
Discontinued Treatment	7.7%	<b>36.4%</b>

Source: <sup>1</sup>Larkin et al., New Eng. J. Med.,373: 23-34, 2015



BeiGene

## Global Strategic Collaboration

- BioAtla grants BeiGene exclusive global license to BA3071; BeiGene is responsible for all development, manufacturing and commercialization expenses globally
- BioAtla has received \$25 million in upfront payments & reimbursement
- BioAtla eligible to receive up to \$225.5 million for subsequent regulatory and development milestones together with increased tiered royalties on worldwide sales

## Clinical Development

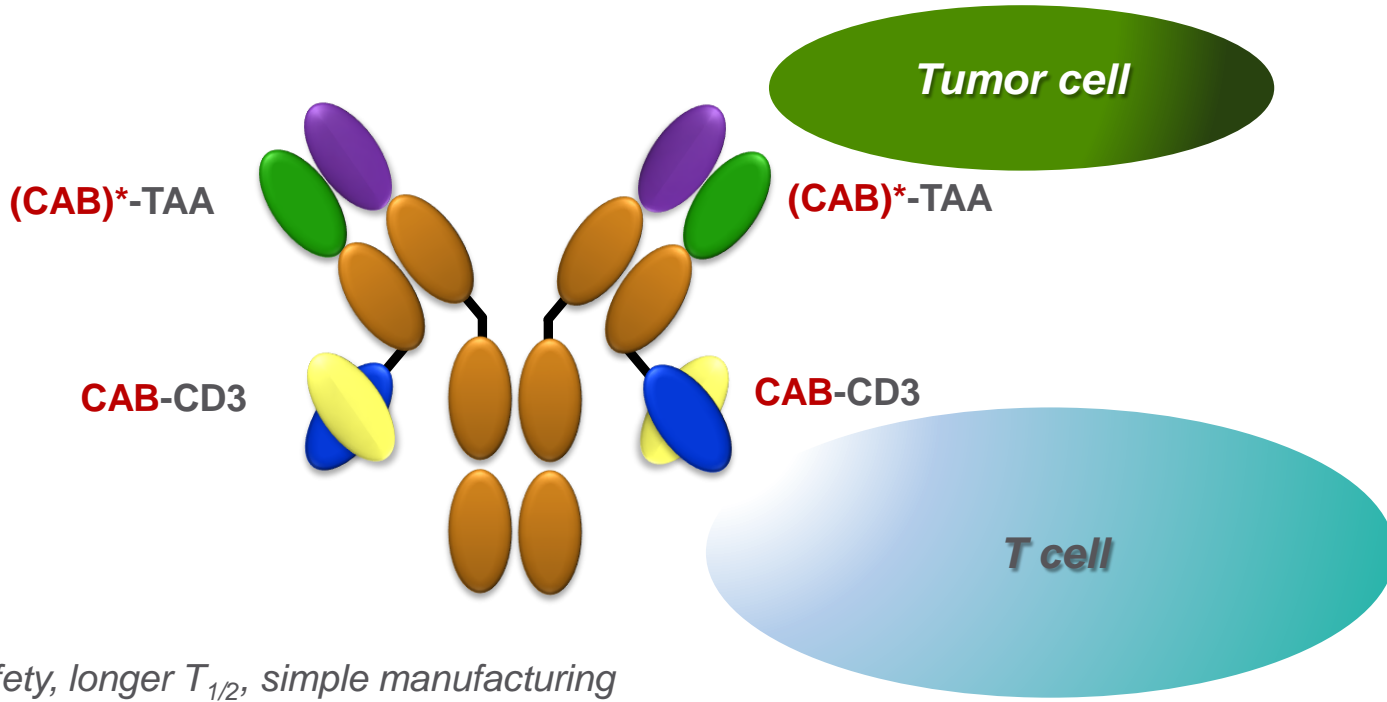
- Expected Phase 1 dose escalation trial in 2021
- Doses of 7mg Q3W to 700mg Q3W<sup>1</sup> as monotherapy and in combination with tislelizumab<sup>2</sup>

## Collaboration & Support

- BeiGene leads Development, Manufacturing and Commercialization activities

<sup>1</sup>Equivalent to 10mg/kg of ipilimumab

<sup>2</sup>Tislelizumab is an anti-PD-1 antibody from BeiGene in late-stage development



**CABs have potential to reduce systemic activation for greater safety and efficacy**



**Reduced cytokine release syndrome and neurological toxicity**



**Enables T cell engaging therapies with high potency while limiting T cell exhaustion**



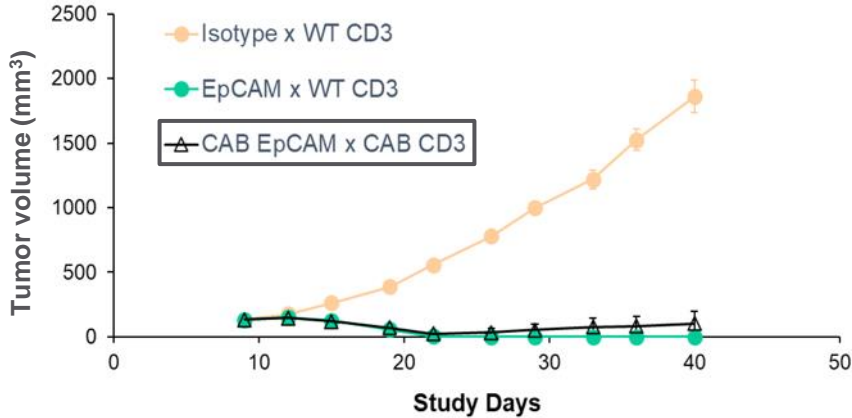
**Four active bispecific programs (BA3182, BA3142, EGFR, Nectin-4)**

Note: \*Optional CAB directed against the tumor associated antigen (TAA)



# CAB-EpCAM x CAB-CD3 Bispecific Antibody Exhibits Comparable Antitumor Activity, While Maintaining Superior Safety Profile

## CAB EpCAM x CAB CD3 bispecific demonstrates efficient tumor shrinkage

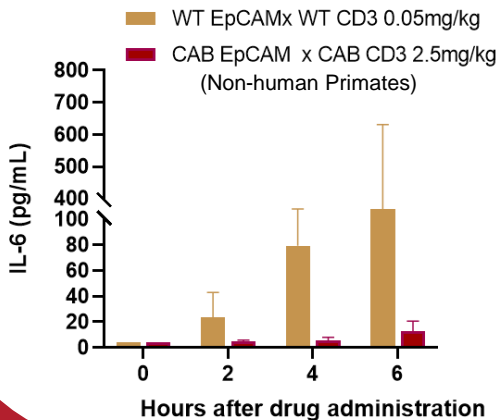


MiXeno Model with HCT116 = Colorectal Cancer Cell Line  
 1mg/kg twice/week in mice  
 (equivalent to 0.25mg/kg in non-human primates)

## Summary

- CAB-EpCAM x CAB-CD3 have comparable antitumor activity to wild type bispecific
- Low toxicity observed, characterized by:
  - Lower levels of IL-6
  - No report of diarrhea/duodenal damage at all dose tested
  - Minimal and transient ALT elevation only observed at highest dose tested (2.5mg/kg). No effect observed for AST and bilirubin.
  - No acute inflammatory changes in the liver, intestines and kidneys at any dose tested
- > 10x Higher Therapeutic Index

## CAB EpCAM exhibits lower IL-6 levels associated with severe cytokine-related toxicities



## Bispecific Safety Results (Non-GLP; Non-human Primates)

### WT-EpCAM x WT-CD3

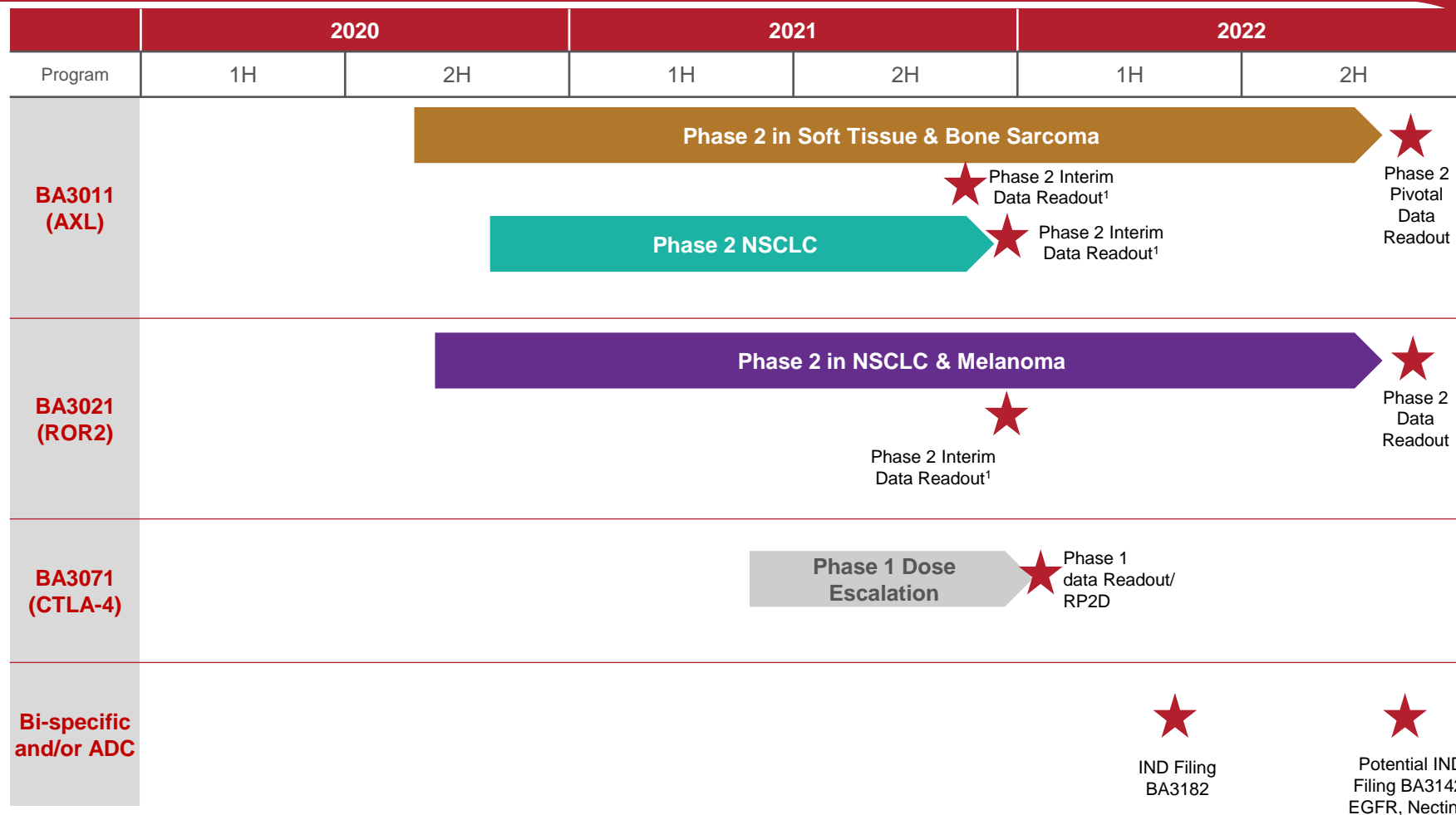
0.05 mg/kg = 2 expired  
 \*0.025mg/kg = 2 ill

WT = wild type; \*from independent experiments

### CAB-EpCAM x CAB-CD3

0.25mg/kg = 2 normal  
 1.0 mg/kg = 2 normal  
 2.5 mg/kg = 2 normal

# Upcoming Data Readouts and Inflection Points



Note: <sup>1</sup>Ovarian Investigator Initiated Trial not shown

**Y/E 2020 cash on hand of \$239 mm;**  
**Sufficient capital to get through all listed inflection points and well into 2023**

## *BioAtla is well positioned to develop a strong franchise of CAB-enabled treatments*



**Innovative** CAB technology platform, with clinically-validated antibodies, that conditionally activate at optimal exposure levels, exhibit high potency, and possess ideal safety profiles



**Multiple clinical assets** demonstrating differentiated CAB technology and strong results for challenging targets, leading to novel therapeutics that can fulfil previously unmet patient needs, and resulting in a broad and diverse pipeline



**Strong intellectual property** foundation with over 250 patents issued and many pending patents providing worldwide coverage with multiple patents covering each of the CAB/PaCS, CIAO technology platforms and products



**Talented and experienced** management team, with a strong track record and over 20 years of experience on average with leading biopharmaceutical companies



**Strong financial position** with \$239 million at YE 2020 and the opportunity for additional future milestone payments providing funding well into 2023



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