

### **Corporate Presentation**

NASDAQ: CRIS



### Cautionary Note Regarding Forward Looking Statements

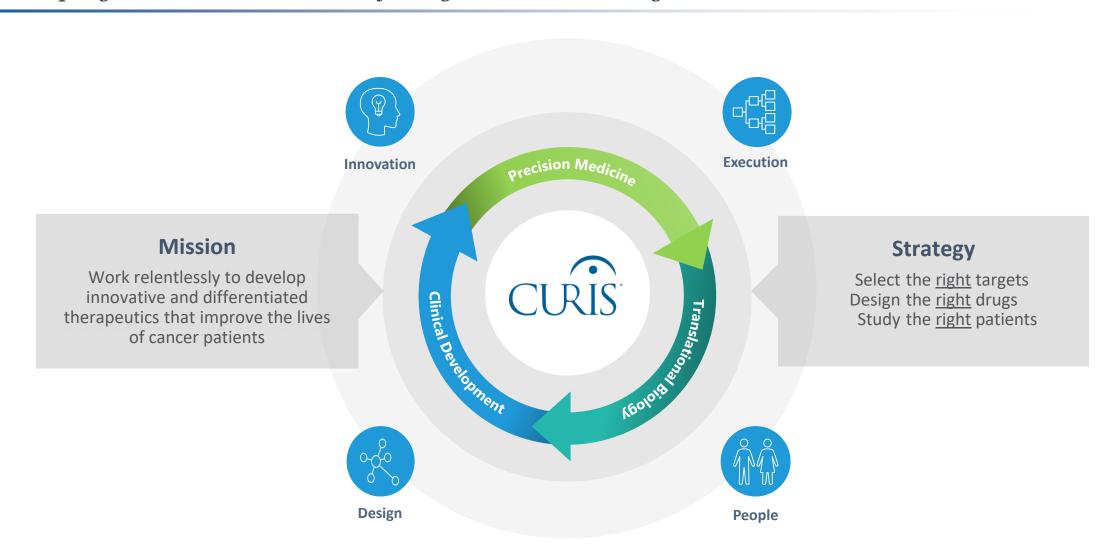


This presentation contains certain forward-looking statements about Curis, Inc. ("we," "us," or the "Company") within the meaning of the Private Securities Litigation Reform Act of 1995, as amended. Words such as "expect(s)," "believe(s)," "may," "anticipate(s)," "focus(es)," "plans," "mission," "strategy," "potential," "estimate(s)", "intend," "project," "seek," "should," "would" and similar expressions are intended to identify forward-looking statements. Forward-looking statements are statements that are not historical facts, reflect management's expectations as of the date of this presentation, and involve important risks and uncertainties. Forward-looking statements herein include, but are not limited to, statements with respect to the timing and results of future clinical and pre-clinical milestones; the timing of future preclinical studies and clinical trials and results of these studies and trials; the clinical and therapeutic potential of our drug candidates; and management's ability to successfully achieve its goals. These forward-looking statements are based on our current expectations and may differ materially from actual results due to a variety of important factors including, without limitation, risks relating to: whether any of our drug candidates will advance further in the clinical development process and whether and when, if at all, they will receive approval from the U.S. Food and Drug Administration or equivalent foreign regulatory agencies; whether historical preclinical results will be predictive of future clinical trial results; whether historical clinical trial results will be predictive of future trial results; whether any of our drug candidate discovery and development efforts will be successful; whether any of our drug candidates will be successfully marketed if approved; our ability to achieve the benefits contemplated by our collaboration agreements; management's ability to successfully achieve its goals; the sufficiency of our cash resources; our ability to raise additional capital to fund our operations on terms acceptable to us or the use of proceeds of any offering of securities or other financing; general economic conditions; competition; and the other risk factors contained in our periodic and interim reports filed with the Securities and Exchange Commission which are available on the SEC website at www.sec.gov. You are cautioned not to place undue reliance on these forwardlooking statements that speak only as of the date hereof, and we do not undertake any obligation to revise and disseminate forward-looking statements to reflect events or circumstances after the date hereof, or to reflect the occurrence of or non-occurrence of any events, except as required by law.

### **Curis Mission & Strategy**



Developing the New Generation of Targeted Cancer Drugs



# Company Overview



Investment Thesis	Curis seeks to develop novel, first-in-class, cancer therapeutics that we believe have significant potential in areas of unmet patient need					
Robust Pipeline	CA-4948: first-in-class inhibitor of IRAK4 in oncology  There are no drugs currently approved for IRAK4 inhibition in oncology  CI-8993: first-in-class antagonist of VISTA  There are no drugs currently approved for VISTA inhibition					
Corporate	<ul> <li>Experienced management team with proven capabilities</li> <li>Curis R&amp;D pioneered the first-in-class inhibitor of the Hedgehog pathway (Erivedge®) partnered with and commercialized by Genentech/Roche for advanced basal cell carcinoma</li> <li>Pro forma cash and investments of approximately \$185M* as of Nov 30, 2020</li> </ul>					

<sup>\*</sup>Pro Forma Cash = \$26.3M as reported + \$159.1M in proceeds from December Public Offering

### **Evolution of Curis**



Progressing through Clinical Studies on the Path to Potential Registration

2019 2020 2021 **Expand Clinical Opportunities** Initial Clinical Data Registrational Strategy Report expanded Ph1 data for CA-4948 study Initiate Combination Study of CA-4948 and Report initial Ph1 data for CA-4948 in in NHL and identify Recommended Phase 2 ibrutinib in NHL and evaluate potential paths NHL Dose (RP2D) for registration Evaluate new published research in Initiate a Ph1 study of CA-4948 in AML/MDS Report expanded Ph1 data for CA-4948 study IRAK4-L expression and the potential including patients expressing IRAK4-L and in AML/MDS and identify Recommended Phase opportunity for CA-4948 in AML/MDS report initial Ph1 data 2 Dose (RP2D) Acquire exclusive option to license the Initiate the clinical and non-clinical research leading VISTA monoclonal antibody program collaboration with the NCI under the CRADA (CI-8993) and initiate a Ph1 study for CA-4948 Report initial clinical data for CI-8993 Ph1 study targeting VISTA in solid tumors

### Pipeline



### All Curis programs are novel, first-in-class



ImmuNext \*\* Option to license IP from ImmuNext

Genentech \*\*\* IP licensed to Genentech (Curis receives royalty income)





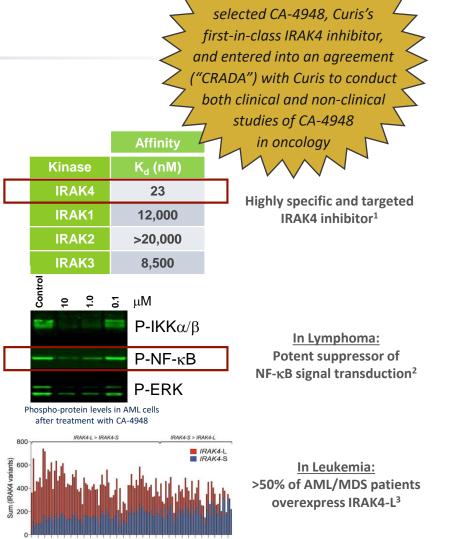
### IRAK4 Targeted Program in AML/MDS

CA-4948: In development for treatment of cancers driven by IRAK4-L

### CA-4948 Overview

### First-in-Class Inhibitor of IRAK4 in Oncology

	Profile	
Value Proposition	<ul> <li>First-in-class IRAK4 inhibitor in cancer</li> <li>Specific malignancies in Lymphoma are characterized by overactivity of NF-κB and the TLR/myddosome (which is dependent upon IRAK4)</li> <li>Specific malignancies in Leukemia are characterized by spliceosome mutations that cause an overexpression of IRAK4-L (the oncogenic isoform of IRAK4)</li> <li>Composition-of-matter IP extends into 2035</li> </ul>	
Target Patient Population	Lymphoma: 100% of patients treated w/ibrutinib (IRAK4i combination with BTKi)  Leukemia: >50% of AML/MDS patients (population which overexpresses IRAK4-L)	
Product Candidate Description	<ul> <li>Potent and orally bioavailable inhibitor of IRAK4 for treatment of NF-κB driven lymphomas and IRAK4-L driven leukemia</li> </ul>	



AML patients (ordered by ratio of IRAK4-L to IRAK4-S)

In Nov 2020, the NCI

<sup>1)</sup> Data from Curis preclinical study

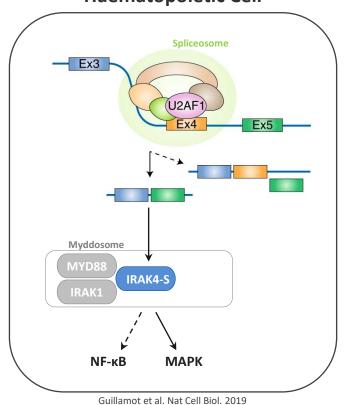
<sup>2)</sup> Booher et al. AACR 2017 (poster #1168)

<sup>3)</sup> Smith et al. Nat Cell Biol 2019

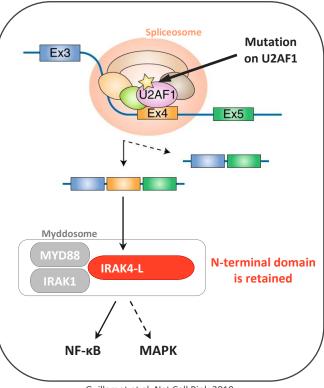


#### IRAK4-L is a Novel Target in AML/MDS

# Normal Haematopoietic Cell



# Malignant Haematopoietic Cell



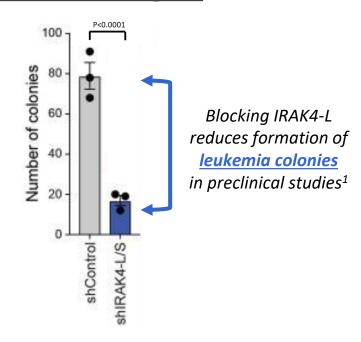
Guillamot et al. Nat Cell Biol. 2019

specific genetic mutations (incl. U2AF1 and SF3B1) drive the expression of IRAK-L, the long isoform of IRAK4



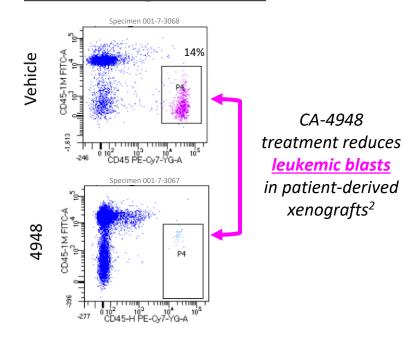
#### Targeting IRAK-L Demonstrates Anti-Cancer Activity in Preclinical Models

#### **IRAK4-L** is Oncogenic



IRAK4-L knockdown models demonstrate genetic link to oncogenic immune signaling in AML/MDS<sup>1</sup>

#### CA-4948 Targets IRAK4-L



IRAK4-L inhibition with CA-4948 demonstrates anti-cancer activity consistent with knockdown models<sup>2</sup>

<sup>1)</sup> Smith et al. Nat Cell Biol 2019

<sup>2)</sup> Choudhary et al. AACR 2017



#### Landscape of Disease Targets in AML/MDS

<u>Disease Driver</u>	% of Patient Population
IRAK4-L	> 50% <sup>1</sup>
FLT3	25-30% <sup>2</sup>
TET2	10-20%3
IDH2	9-13%4
IDH1	6-10%4
CEBPA	~10%3

- Non-targeted therapies administered in monotherapy have historically provided limited clinical benefit, especially in relapsed/refractory patients
- Targeted therapies (e.g., FLT3, IDH) have been limited by the size of their respective target patient populations
- IRAK4-L is a novel target in AML/MDS and has been shown to be preferentially expressed in >50% of the AML/MDS patient population

<sup>1)</sup> Smith et al. Nat Cell Biol 2019

<sup>2)</sup> Saygin, et al. J Hematol Oncol. 2017 Apr 18

<sup>3)</sup> https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6142505/

<sup>4)</sup> DiNardo et al. N Engl J Med 2018



### Trial Design

Data cut-off: 23Nov2020

Baseline Characteristics of Ph1 Patients	Overall (N=6)
Male (%)	5 (83%)
Female (%)	1 (17%)
Median Age (range)	72 (32-84)
Median Prior Therapies (range)	3 (1-4)
Histology	
Acute Myelogenous Leukemia (AML)	4 (67%)
Myelodysplastic Syndrome (MDS)	2 (33%)

#### **Study Objectives**

Primary: Maximum tolerated dose and recommended Phase 2 dose Secondary: Pharmacokinetic (PK) profile, preliminary anti-cancer activity

#### **Study Population**

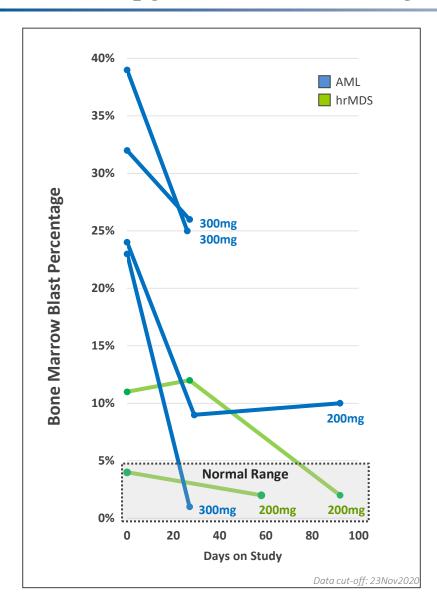
- Relapsed/Refractory disease
- Histopathologically confirmed AML or High-Risk MDS
- Age ≥ 18 years
- ECOG performance Status of ≤ 2

#### Dosing

- Oral
- 28-day cycles
- 3+3 escalation design (200mg BID, 300mg BID, and 400mg BID)



#### Monotherapy Anti-Cancer Activity Observed in Early Ph1 Data



- 1<sup>st</sup> patient dosed in Q3 2020
- Consistent reduction of Marrow Blasts across population (6 patients)
- 2 patients have achieved Marrow CR

		Blasts Baseline	Blasts Best Resp	<u>Change</u>	
AML	005-2003	32%	26%	-19%	
AML	005-2002	39%	25%	-36%	
AML	003-1002	24%	9%	-63%	
hrMDS	003-1003	4%	2%	-50%	
hrMDS	003-1001	11%	2%	-82%	<b>Marrow CR</b>
AML	005-2001	23%	1%	-96%	<b>Marrow CR</b>

Note: To achieve Marrow CR, a patient's blast count must be elevated at baseline (>5%) and, after treatment, decrease by  $\geq$  50% from baseline into the normal range ( $\leq$ 5%)





IRAK4 Targeted Program in NHL

CA-4948: In development for treatment of cancers driven by NF-kB and the TLR/Myddosome



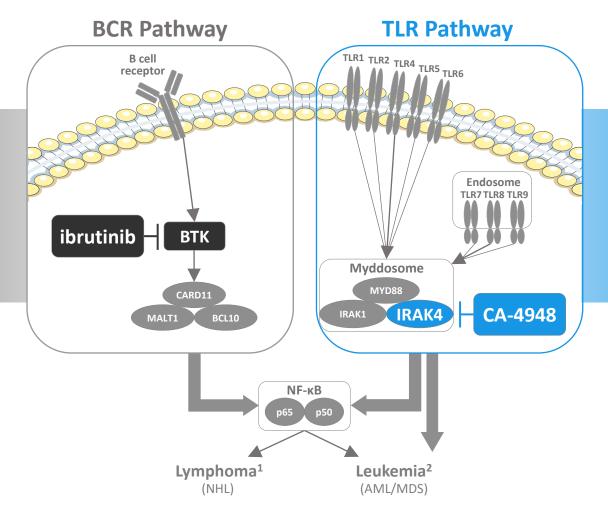
### Novel Mechanism of Action for Addressing NF-κB

BCR and TLR are parallel pathways and primary independent activators of NF-кВ

Pathway is Oncogenic

Pathway activates NF-кВ

Pathway is dependent upon BTK



Pathway is Oncogenic<sup>2,3,4</sup>

Pathway activates NF-кВ

Pathway is dependent upon IRAK4

-Signaling requires myddosome, which requires IRAK4

<sup>1)</sup> IMBRUVICA Package Insert. Rev 08/2018

<sup>2)</sup> Ngo et al. Nature. 2011 Feb 3;470(7332):115-9

<sup>3)</sup> Küppers et al. J Exp Med. 2015. 212(13): 2184

<sup>4)</sup> Smith et al. Nat Cell Biol 2019



### Trial Design

20

Do	ata cut-off: 23Nov20.
Baseline Characteristics of Ph1 Patients	Overall (N=31)
Male	26 (84%)
Female	5 (16%)
Median Age	69yrs
Histology	
Diffuse large B-cell lymphoma (DLBCL)	14 (45%)
Transformed follicular lymphoma (t-FL/DLBCL)	6 (19%)
Waldenström's Macroglobulinemia (WM)	4 (13%)
Other Lymphoma*	7 (23%)
Prior Therapies	
Median prior lines of therapy	4 prior lines
BTK inhibitor, n (%)	6 (19%)
CAR-T, n (%)	5 (16%)
ASCT , n (%)	7 (23%)
Other	13 (42%)
MYD88 Status	
Positive, n (%)	2 (6%)
Negative, n (%)	18 (58%)
Unknown, n (%)	11 (35%)

\*includes Lymphoplasmacytic (n=2), Mantle Cell (n=2), Marginal Zone (n=2), High Grade MYC-BCL<sub>6</sub> (n=1)

#### **Study Objectives**

Primary: Safety and tolerability

Secondary: Pharmacokinetic (PK) profile, preliminary anti-cancer activity

#### **Study Population**

- Relapsed/Refractory disease
- Histopathologically confirmed B-cell NHL, including WM/LPL
- Age ≥ 18 years
- ECOG performance status of ≤ 1

#### **Dosing**

- Oral, QD or BID continuous dosing
- 21-day cycles

#### Dose Levels, 3+3 Design

QD: 50, 100mg

BID: 50, 100, 200, 300 or 400mg

### Treatment Emerging Adverse Events



Most AEs have been Grade 1-2, manageable, and reversible

	Adverse Reaction		<b>200 mg BID</b> (n=5); (%)		<b>300 mg BID</b> (n=6); (%)		<b>400 mg BID</b> (n=8); (%)	
		All Grades	Grade 3 or 4	All Grades	Grade 3 or 4	All Grades	Grade 3 or 4	All Grades
	Diarrhea	20	0	33	0	25	0	20
Gastrointestinal	Nausea	20	0	17	0	38	0	27
disorders	Vomiting	20	0	17	17	25	0	20
	Constipation	20	0	0	0	13	0	20
	Upper respiratory infection	40	20	0	0	13	0	7
Respiratory	Dyspnoe	20	0	0	0	13	13	7
	Upper-airway cough	40	0	0	0	0	0	7
	Fatigue	40	0	0	0	50	0	37
General & Other	Oedema	20	0	0	0	0	0	10
	Dehydration	20	0	0	0	13	13	10
	Headache	20	0	0	0	13	0	10
Nervous system	Dizziness	0	0	0	0	25	0	20
disorders	Insomnia	20	0	0	0	13	0	7
	Peripheral sensory neuropathy	0	0	0	0	25	0	7
	Back pain	20	0	0	0	13	0	10
Musculoskeletal disorders	Myalgia	40	0	0	0	38	0	17
	Rhabdomyolysis	0	0	0	0	25	25	7
	Muscle weakness	20	20	0	0	13	0	7
	Neutropenia	40	40	17	17	25	0	7
Hematological	Anemia	20	0	33	0	13	13	20
	Thrombocytopenia	0	0	0	0	13	13	7

Data cut-off: 110ct2020

#### General

- No Grade 5 toxicity
- Only 2 treatment discontinuations due to TEAEs; both at low doses
- (asymptomatic amylase increase; rash)
- Intra-patient dose-reductions: 13%
- Intra-patient dose-escalations: 10%

#### Rhabdomyolysis

- Observed in 2 patients, based on muscle soreness and CPK elevation
- No renal dysfunction was observed
- Both cases observed in Cycle 1 of dosing, early monitoring of CPK required
- Additional risk factors may be present (vigorous exercise, dehydration, comedications such as lipid-lowering statins)
- Requires dose interruption; treatment according to clinical presentation; in our uncomplicated cases, hydration, symptom control
- Both cases were reversible; treatment can be resumed at lower dose level

#### Other

- No TLS
- ECG no significant changes from baseline; no delayed toxicity

**BCR Pathway** 

**BTK** 

Lymphoma<sup>1</sup>

(NHL)

B cell

receptor

ibrutinib



#### Two Potential Biomarkers Identified

**TLR Pathway** 

Endosome TLR7 TLR8 TLR9

CA-4948

TLR1 TLR2 TLR4 TLR5 TLR6

Myddosome MYD88

Leukemia<sup>2</sup>

(AML/MDS)

**IRAK4** 

2

Is NF-κB activity driven by the TLR/myddosomal axis?

#### **MYD88 Mutation**

Genetic alteration of MYD88 at baseline causes constitutive activation of the myddosome and is a driver of NF-κB activity

This potential predictive biomarker may support patient enrichment by identifying patients with excessive myddosome activity (who may therefore be good candidates for IRAK4 inhibition)



Is NF-κB is active?

#### NF-κB phospho-p50

Positive expression of NF-κB phospho-p50 indicates that the NF-κB complex is active

This potential biomarker may support patient selection and provide evidence that CA-4948 is hitting the direct target (IRAK4) and inhibiting the downstream target (the NF-κB complex)

<sup>1)</sup> IMBRUVICA Package Insert. Rev 08/2018

<sup>2)</sup> Ngo et al. Nature. 2011 Feb 3;470(7332):115-9

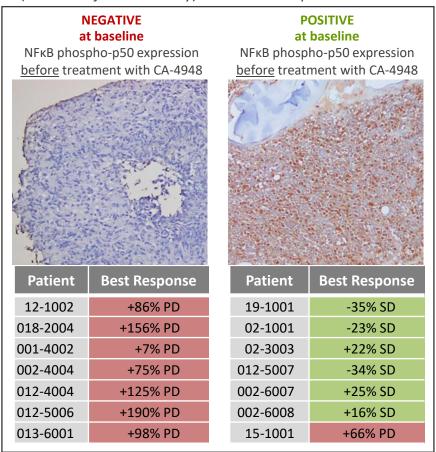


#### Early Biomarker Data from Phase 1 patients

This clinical study is ongoing, more data are needed to confirm these potential biomarkers

#### NF-кВ phospho-p50

NF-кВ phospho-p50 protein expression at baseline (indicator of NF-кВ activity) correlates with patient outcomes



Note: data included for all patients for whom pre/post samples were available as of Nov 23, 2020

#### p-p50 Biomarker May Support Patient Selection

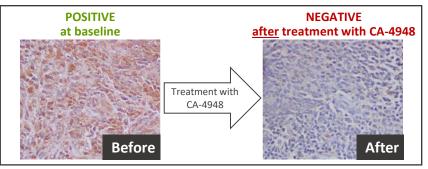
- Patients whose tumors do <u>not</u> exhibit NF-κB activity may <u>not</u> be amenable to NF-κB downregulation
   7 of 7 patients testing negative at baseline experienced disease progression
   2 of these patients were dosed at 200mg BID
- Patients whose tumors do exhibit NF-κB activity may be amenable to NF-κB downregulation
   6 of 7 patients testing positive for p-p50 at baseline achieved stable disease or tumor shrinkage
   1 of these patients (012-5007) was dosed at 300mg BID

#### **MYD88 Biomarker May Support Patient Enrichment**

- Both patients whose tumor tested positive for MYD88 mutation saw tumor reduction
- Observed tumor reduction is consistent with our thesis that patients with MYD88-mutated tumors should benefit from IRAK4 inhibition

Phospho-p50 Expression in Pre/Post Tumor Biopsies Also Provides Evidence that CA-4948 is Hitting the Target (IRAK4) and Downregulating NF-κΒ Activity

After treating the patient with CA-4948, their tumor no longer expresses NF-κB phospho-p50

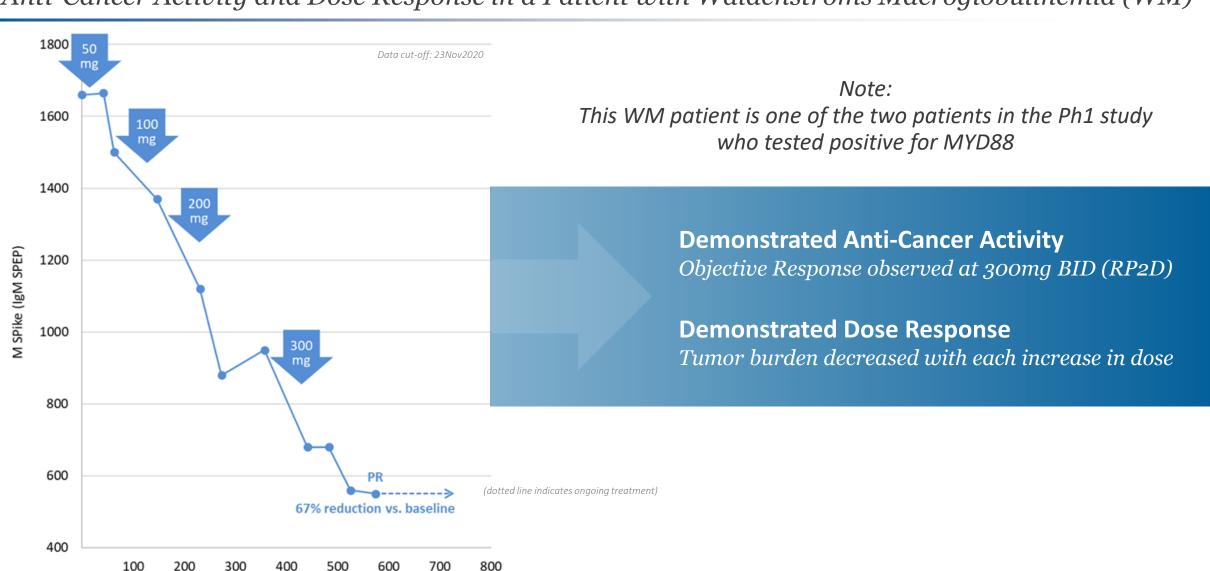


(Day 20)

Days on Study



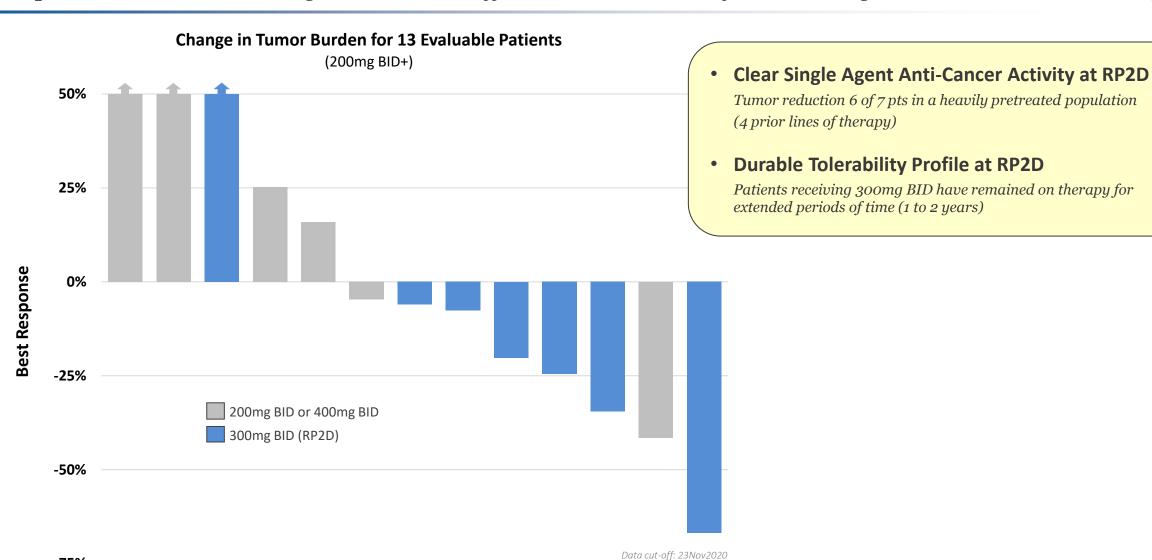
Anti-Cancer Activity and Dose Response in a Patient with Waldenströms Macroglobulinemia (WM)



-75%

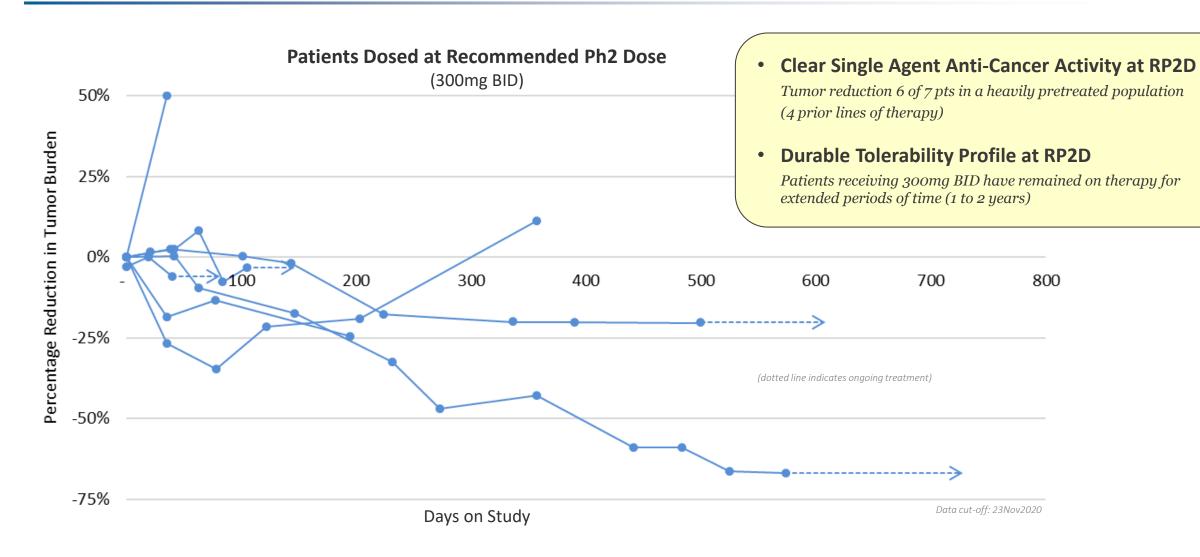


In Updated Ph1 Data, 300mg BID (RP2D) Offered Best Balance of Tolerability and Anti-Cancer Activity





In Updated Ph1 Data, 300mg BID (RP2D) Offered Best Balance of Tolerability and Anti-Cancer Activity

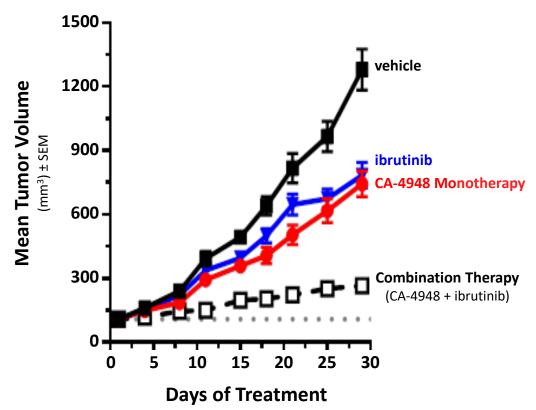




2021 Plan: Initiate Clinical Study in Combination Therapy (CA-4948 + ibrutinib)

## Anti-Cancer Activity in Monotherapy and Combination Therapy

in MYD88-altered DLBCL preclinical model (OCI-Ly10)



Booher et al. Waldenstrom Roadmap Symposium 2019

#### **Mechanism of Action Supports Combination**

• CA-4948 potentially offers a novel mechanism for reducing NF-kB activity by targeting the TLR/myddosome (a parallel/complementary pathway to the BCR/BTK pathway)

#### **Clear Single Agent Anti-Cancer Activity**

 Monotherapy anti-cancer activity demonstrated in both preclinical models and initial Ph1 data

#### **Clear Synergy with ibrutinib**

- CA-4948 and ibrutinib show clear synergy in preclinical models
- Next Step: initiate clinical study of CA-4948 and ibrutinib

### CA-4948 in Lymphoma (planned combination study)



### Trial Design

#### **Study Objectives**

Primary: Safety and tolerability of CA-4948 in combination with ibrutinib Secondary: Pharmacokinetic (PK) profile, preliminary anti-cancer activity

#### **Study Population**

- Relapsed/Refractory disease
- Histopathologically confirmed B-cell NHL, including WM/LPL
- Age ≥ 18 years
- ECOG performance Status of ≤ 1

#### Dosing

- CA-4948 Oral twice daily
- ibrutinib Oral daily at labeled dose
- 21-day cycles
- 3+3 escalation design for CA-4948 (1st cohort will be 200mg BID)

#### Additional Patient Cohorts to be Studied in Planned Expansion

- BTK-naïve, Marginal Zone Lymphoma (MZL)
- BTK-naïve, ABC-DLBCL
- BTK-naïve, Primary CNS Lymphoma (PCNSL)
- Patients with adaptive resistance to ibrutinib





### VISTA Targeted Program in Solid Tumors

CI-8993: In development for treatment of cancers driven by VISTA-mediated Immune Suppression

### CI-8993 Overview



### In Development for VISTA Expressing and Infiltrated Cancers

Profile				
Value Proposition	<ul> <li>First-in-class monoclonal antibody antagonist of VISTA</li> <li>Composition-of-matter IP extends into 2034</li> </ul>			
Target Patient Population	<ul> <li>Patients with VISTA-expressing cancers (incl. Mesothelioma, NSCLC, and TNBC)</li> <li>Patients receiving PD1/PDL1 or CTLA4 antibody therapy         <ul> <li>(or those who have already received it and have developed resistance to it)</li> </ul> </li> </ul>			
Product Description	<ul> <li>Monoclonal antibody developed by ImmuNext/Janssen in partnership with Randy Noelle's lab at Dartmouth (the co-discoverer of VISTA)</li> </ul>			

### CI-8993 Target Background



### VISTA is an Important Checkpoint Regulator

#### RESEARCH ARTICLE SUMMARY

#### T CELLS

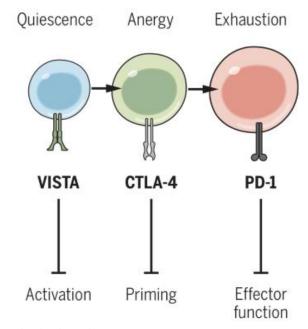
# VISTA is a checkpoint regulator for naïve T cell quiescence and peripheral tolerance

Mohamed A. ElTanbouly\*, Yanding Zhao\*, Elizabeth Nowak, Jiannan Li, Evelien Schaafsma, Isabelle Le Mercier, Sabrina Ceeraz, J. Louise Lines, Changwei Peng, Catherine Carriere, Xin Huang, Maria Day, Brent Koehn, Sam W. Lee, Milagros Silva Morales, Kristin A. Hogquist, Stephen C. Jameson, Daniel Mueller, Jay Rothstein, Bruce R. Blazar, Chao Cheng†, Randolph J. Noelle†

- CTLA-4, PD-1, and VISTA are the three main players in controlling checkpoint blockade
- VISTA controls early T cell activation events
- Blockade of VISTA will allow for an expanded T cell response against tumors

Eltanbouly et al. Science. 2020

#### Integration of VISTA with other wellestablished negative checkpoint regulators of T cell activation

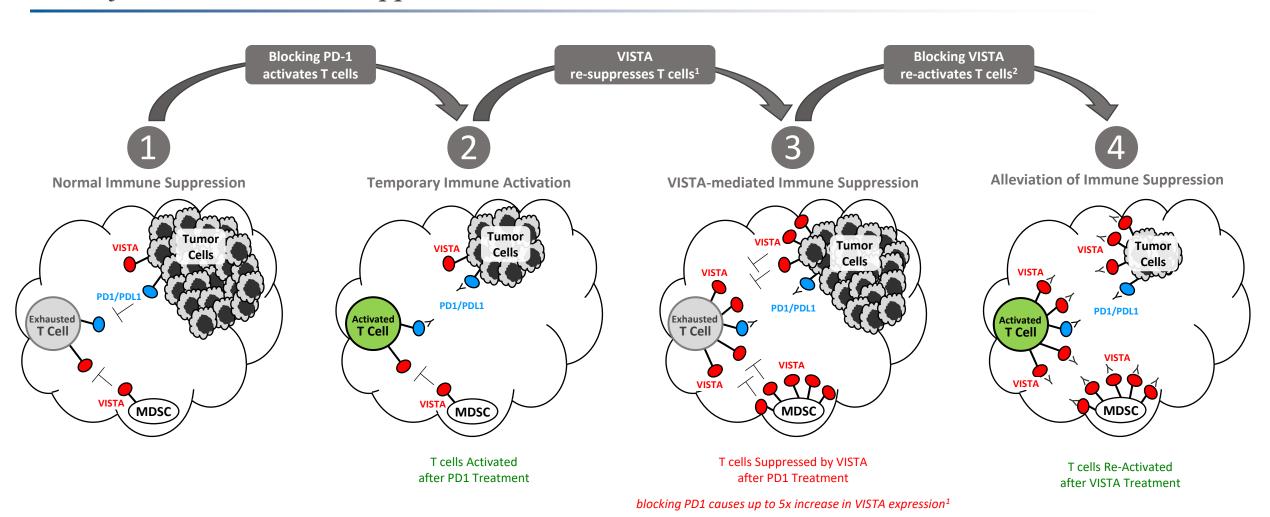


Eltanbouly et al. Science. 2020

### CI-8993 Target Background



Role of VISTA in Immune Suppression in the Tumor Microenvironment (TME)



<sup>&</sup>lt;sup>1</sup> Gao et al. Nature. 2017. 23: 551–555

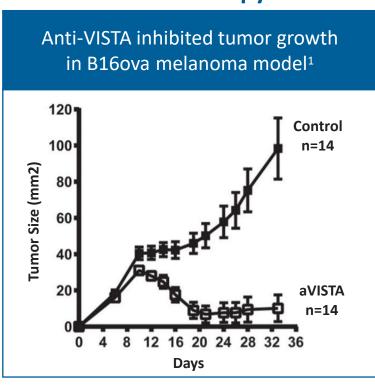
<sup>&</sup>lt;sup>2</sup> Data from ImmuNext preclinical studies

### CI-8993 Preclinical Data



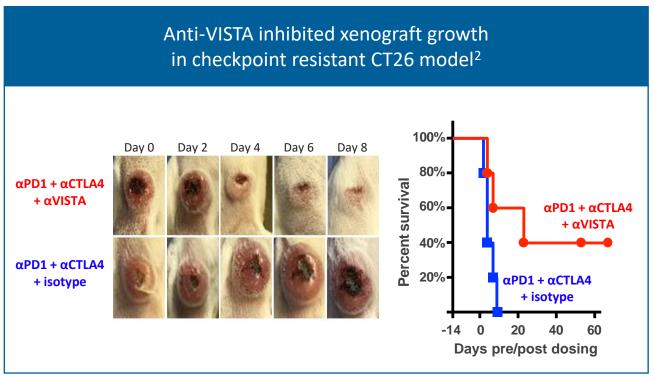
Preclinical anti-cancer activity demonstrated in both monotherapy & combination therapy

#### **Monotherapy**



<sup>1</sup> Le Mercier et al. Cancer Res. 2014 Apr 1

#### **Combination Therapy**



<sup>&</sup>lt;sup>2</sup> J. Lines, IEBMC Conference 2019

### CI-8993 Clinical Plan



### Phase 1 dose escalation study design

#### **Curis Design for Ph1 Dose Escalation Study**



#### **Patient Population**

 Patients with advanced refractory solid tumors (includes mesothelioma, melanoma, NSCLC, TNBC)

#### **Treatment**

- · Bi-weekly dosing
- Mitigate potential toxicities by desensitization, premedication, dosing interval and duration

#### Objective

- Safety, PK/PD, tolerability during dose escalation
- Anti-cancer activity during expansion

#### **Prior clinical development of CI-8993:**

#### CI-8993 was originally developed by Janssen (JNJ-61610588)

- JNJ licensed VISTA IP from ImmuNext in 2012 and initiated a Ph1 study in 2016
- 12 patients were enrolled; initial dose level was 0.005mg/kg
- Low-grade transient Cytokine Release Syndrome (CRS) seen at 0.15mg/kg and above

#### JNJ halted study after 1 DLT at sub-therapeutic dose level

- The only patient treated at 0.3mg/kg experienced grade 3 CRS-associated encephalopathy after 36hrs on treatment
- Patient was initially treated w/antibiotics; symptoms resolved after treatment with tocilizumab
- JNJ opted to halt the study and return IP to ImmuNext

#### Curis Design for Ph1 Study Design Incorporates Key Learnings from Janssen Ph1 Study

- CRS is likely an on-target toxicity; indicates drug is hitting the target and inducing inflammatory response
- Oncology community is now familiar with managing CRS;
   NCCN guidelines were issued in 2018
- FDA cleared the study IND which outlined our plan for managing CRS and enabling escalation to therapeutic dose levels

Target range for expected anti-cancer activity (0.5 - 2.0 mg/kg) was never reached

# Company



## Summary

Investment Thesis	Curis seeks to develop novel, first-in-class, cancer therapeutics that we believe have significant potential in areas of unmet patient need						
Robust Pipeline	CA-4948: first-in-class inhibitor of IRAK4 in oncology  There are no drugs currently approved for IRAK4 inhibition in oncology  CI-8993: first-in-class antagonist of VISTA  There are no drugs currently approved for VISTA inhibition						
Potential Catalysts	1H 2021: Initiate combination study of CA-4948 and ibrutinib in NHL patients 2H 2021: Report expanded data in CA-4948 Ph1 study in AML/MDS patients 2H 2021: Report initial data in CI-8993 dose escalation Ph1 study						

### Curis

# Leadership Team























### **End of Corporate Presentation**

NASDAQ: CRIS

