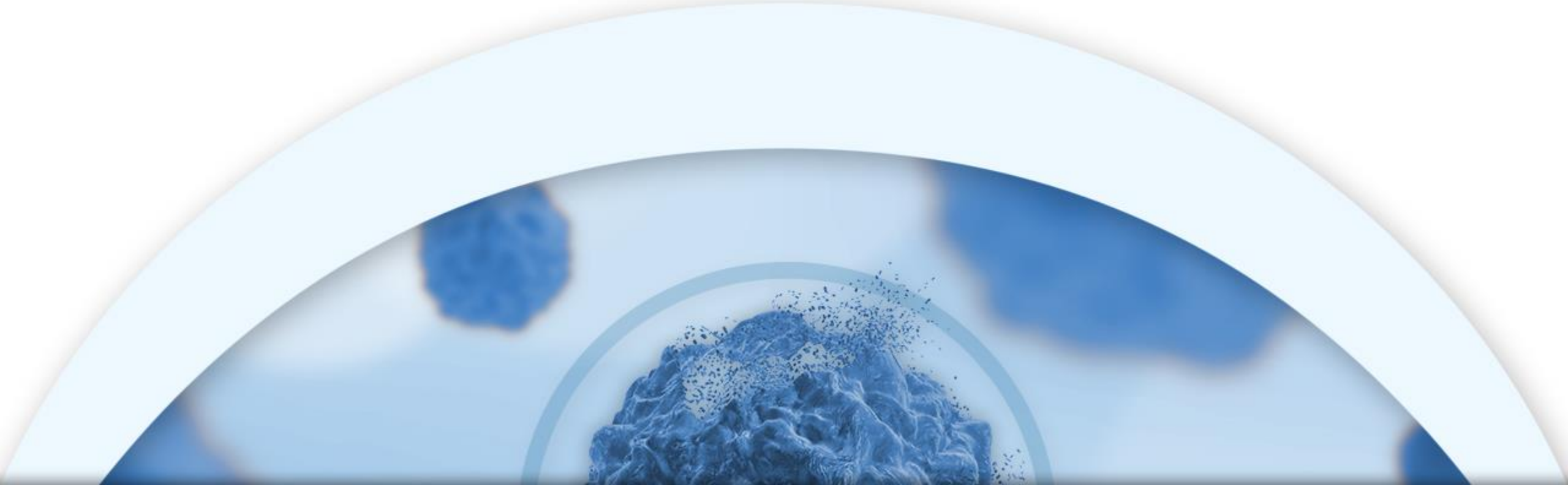
Corporate Presentation

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),” “will,” “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 forward-looking 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.

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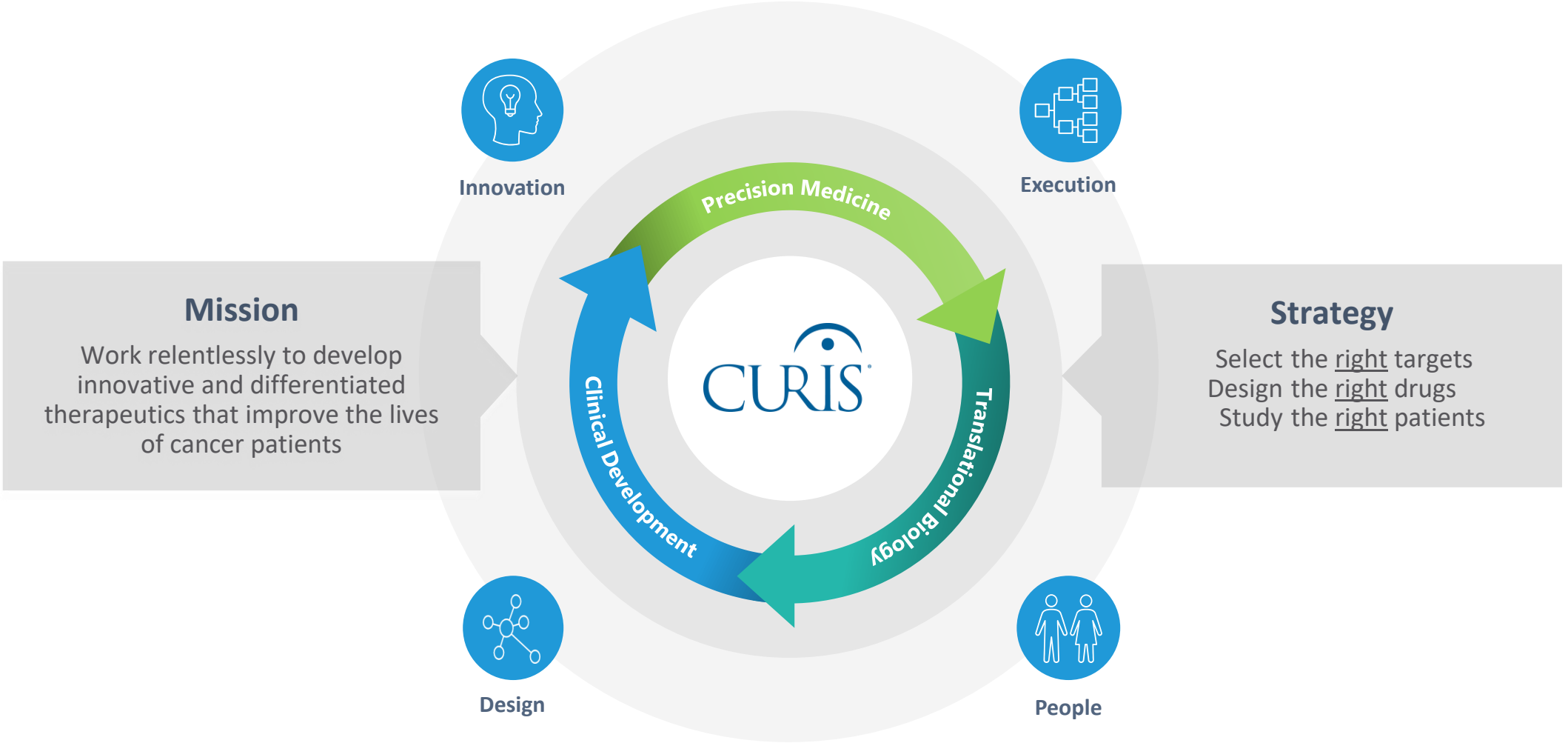
Curis Mission & Strategy

Developing the New Generation of Targeted Cancer Drugs



Mission

Work relentlessly to develop innovative and differentiated therapeutics that improve the lives of cancer patients

Strategy

Select the right targets
Design the right drugs
Study the right patients

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* Fimepinostat: first-in-class suppressor of MYC *There are no drugs currently approved for MYC inhibition*
Corporate	• Experienced management team with proven capabilities • Curis R&D pioneered the first-in-class inhibitor of the Hedgehog pathway (Erivedge®) partnered with and commercialized by Genentech/Roche for advanced basal cell carcinoma • Pro forma cash and investments of approximately $29M* as of Mar 31, 2020 in addition to $30M stock purchase commitment from Aspire Capital

*Pro Forma Cash = $12.5M as reported + $16.5M in proceeds from June Registered Direct Offering

Evolution of Curis

Progressing through Clinical Studies on the Path to Potential Registration

2018

Target Discovery

- ✓ Work with investigators and FDA to determine optimal clinical path
- ✓ Identify patient populations and initiate clinical studies

2019

Initial Clinical Data

- ✓ Report preliminary efficacy data for CA-4948 Ph1 study in NHL
- ✓ Evaluate new published research in IRAK4-L expression and the potential opportunity for CA-4948 in AML/MDS
- ✓ Report efficacy data for CA-170 study (small molecule targeting VISTA) in mesothelioma

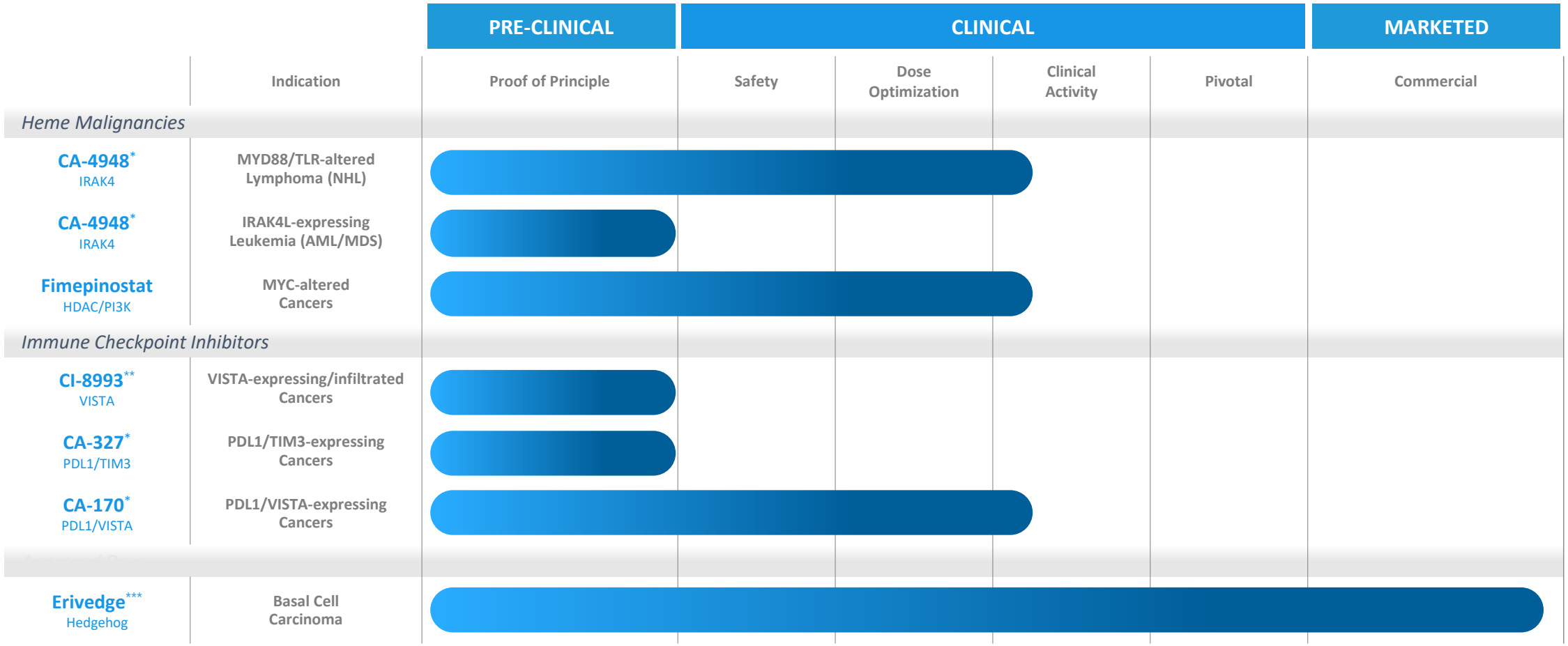
2020

Define Registration Path

- Determine R2PD of CA-4948 in NHL and define path to potential registration
- Capitalize on newly identified opportunity in AML/MDS and initiate a Ph1 study of CA-4948 in patients expressing IRAK4-L
- Capitalize on unique clinical experience with VISTA by in-licensing the leading monoclonal antibody program (CI-8993) and initiating a Ph1 study in solid tumors

Pipeline

All Curis programs are novel, first-in-class



* IP licensed from Aurigene
** Option to license IP from ImmuNext
*** IP licensed to Genentech (Curis receives royalty income)

Targeted Programs in Heme Malignancies

CA-4948: In development for treatment of TLR-altered cancers

CA-4948 Overview

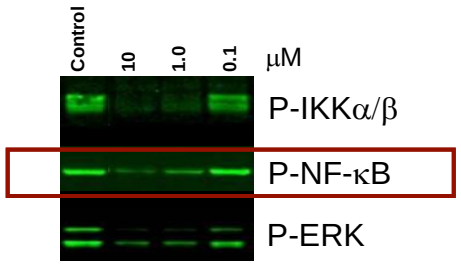
First-in-Class Inhibitor of IRAK4 in Oncology

Profile	
Value Proposition	• First-in-class IRAK4 inhibitor in cancer • Specific malignancies in Lymphoma are characterized by overactivity of the myddosome in the TLR pathway (which is dependent upon IRAK4) • Specific malignancies in Leukemia are characterized by spliceosome mutations that lead to overexpression of IRAK4-L (the oncogenic isoform of IRAK4) • Composition-of-matter IP extends into 2035
Population	Lymphoma: All patients treated with ibrutinib (IRAK4i has strong synergy with BTKi) Leukemia: >50% of AML/MDS patients (the population which overexpresses IRAK4-L)
Product Candidate Description	• Potent and orally bioavailable inhibitor of IRAK4 for treatment of MYD88-altered lymphomas and spliceosome-mutated leukemia

Designed to be best-in-class IRAK4 inhibitor[1]

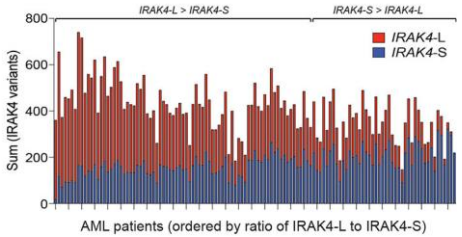
	Affinity
Kinase	K_d (nM)
IRAK4	23
IRAK1	12,000
IRAK2	>20,000
IRAK3	8,500

In Lymphoma:
Potent suppressor of NF-κB signal transduction[2]



Phospho-protein levels in AML cells after treatment with CA-4948

In Leukemia:
>50% of AML/MDS patients overexpress IRAK4-L[3]



1) Data from Curis preclinical study
2) Booher et al. AACR 2017 (poster #1168)
3) Smith et al. Nat Cell Biol 2019

CA-4948

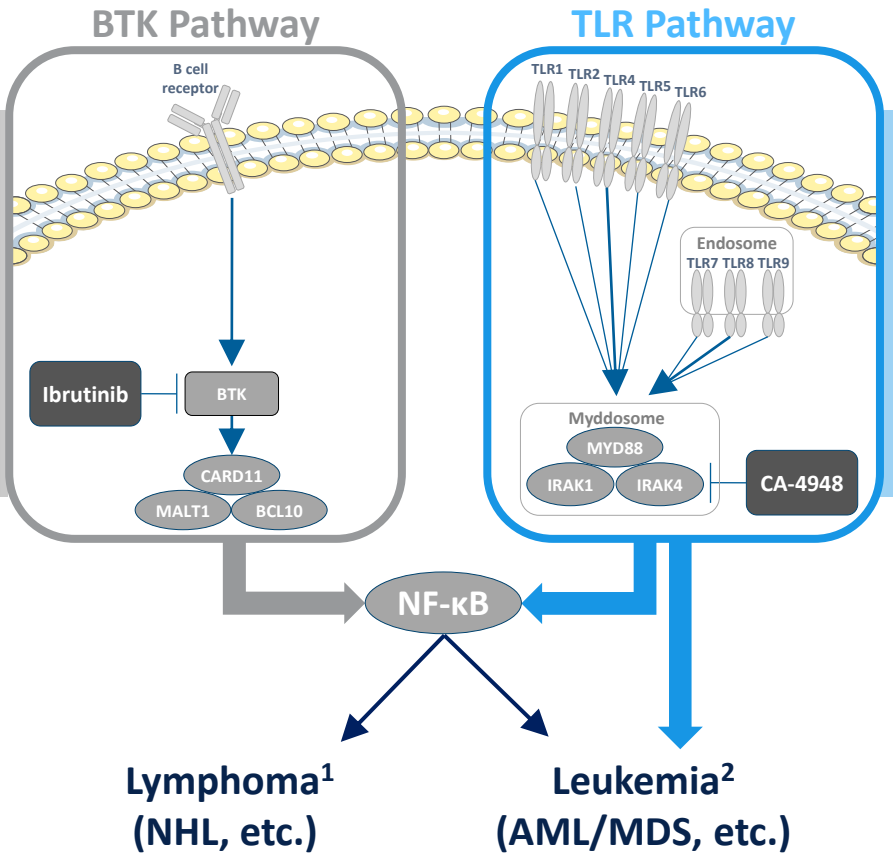
Mechanism of Action

The TLR Pathway is a primary and independent activator of NF-κB and is oncogenic in both Lymphoma and Leukemia

Oncogenic
- Dysregulation drives excessive B Cell proliferation

Pathway validated
- MCL, MZL, CLL, Waldenström's macroglobulinemia[1]

BTK inhibition effective
- Ibrutinib is FDA approved



Oncogenic
- Dysregulation drives excessive B cell proliferation[2,3]

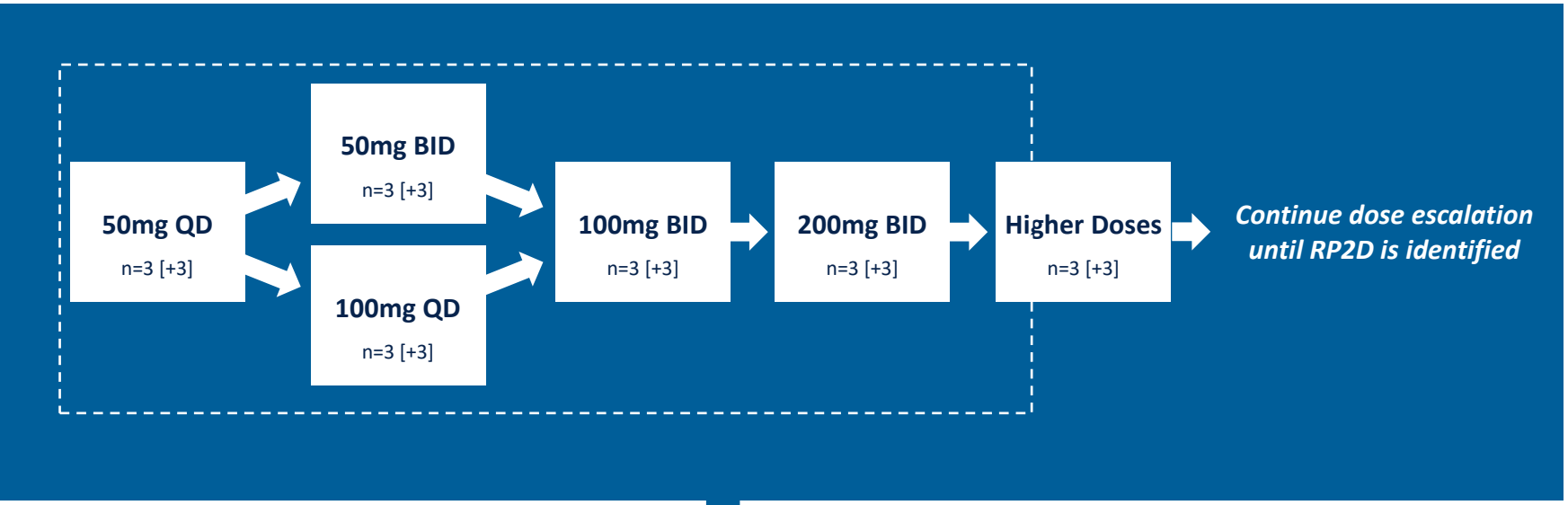
Dependent upon IRAK4
- Signaling requires myddosome, which requires IRAK4

Strong Synergy
- Inhibition highly synergistic with BTK inhibition

1) IMBRUVICA Package Insert. Rev 08/2018
2) Ngo et al. Nature. 2011 Feb 3;470(7332):115-9
3) Küppers et al. J Exp Med. 2015. 212(13): 2184
4) Smith et al. Nat Cell Biol 2019

CA-4948 in Lymphoma

Preliminary Phase 1 Data Demonstrate Tolerability, PK, PD, and Anti-Cancer Activity



Preliminary Phase 1 Data Readout

- Generally well tolerated
- Favorable PK profile, PD, and anti-cancer activity
- 5 of 6 patients dosed at 200mg or higher have seen reduction
- Report updated safety and efficacy data in 2020

Patient Population

- Patients with R/R Lymphoma (incl DLBCL, WM, and patients with MYD88-altered disease)

Treatment

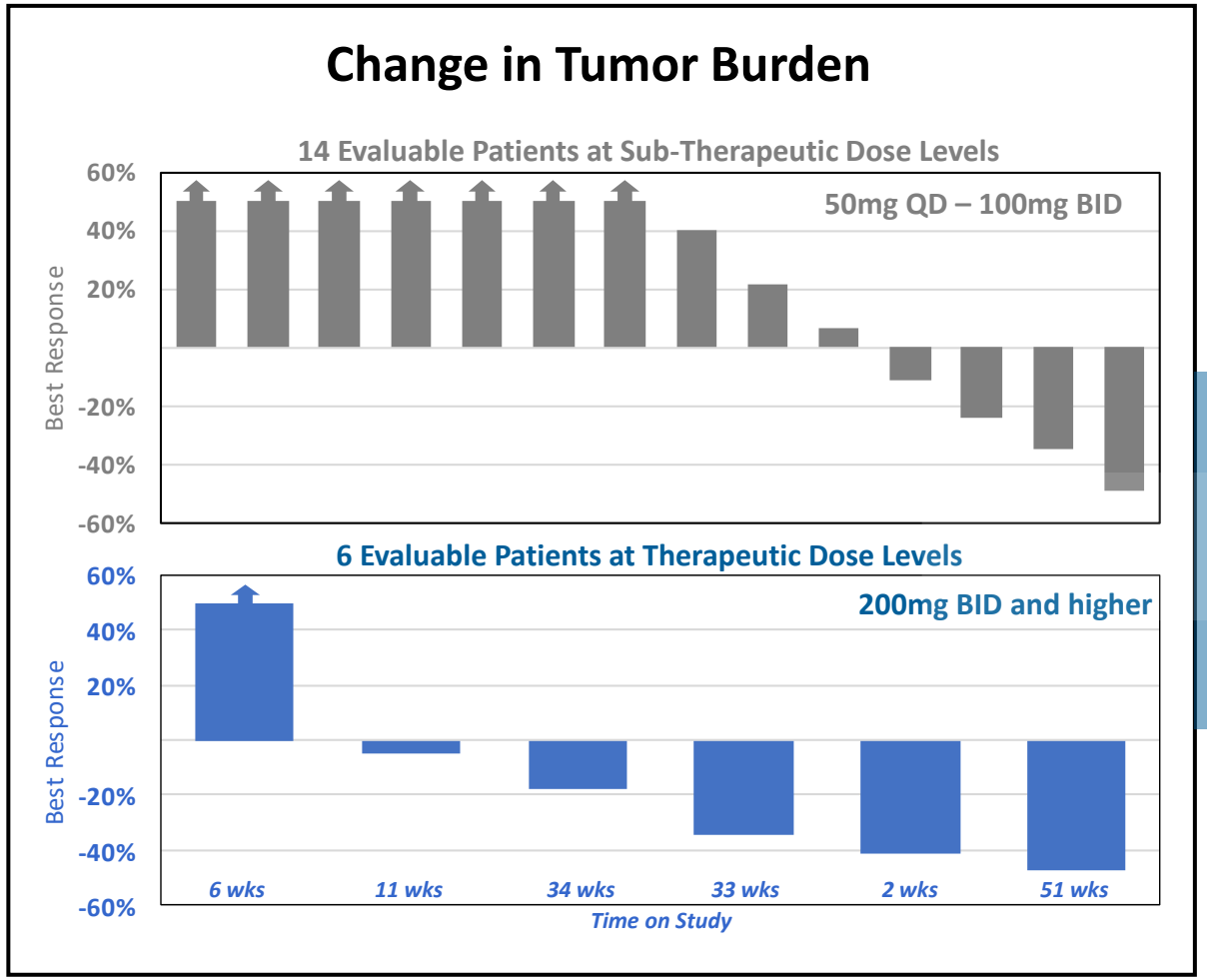
- Oral, once-daily (QD) or twice-daily (BID), dosing in continuous 21-day cycles

Objective

- Safety/tolerability during dose escalation
- Efficacy during expansion

CA-4948 in Lymphoma

Single Agent Dose Response Observed as Phase 1 Study Advances to Therapeutic Dose Levels

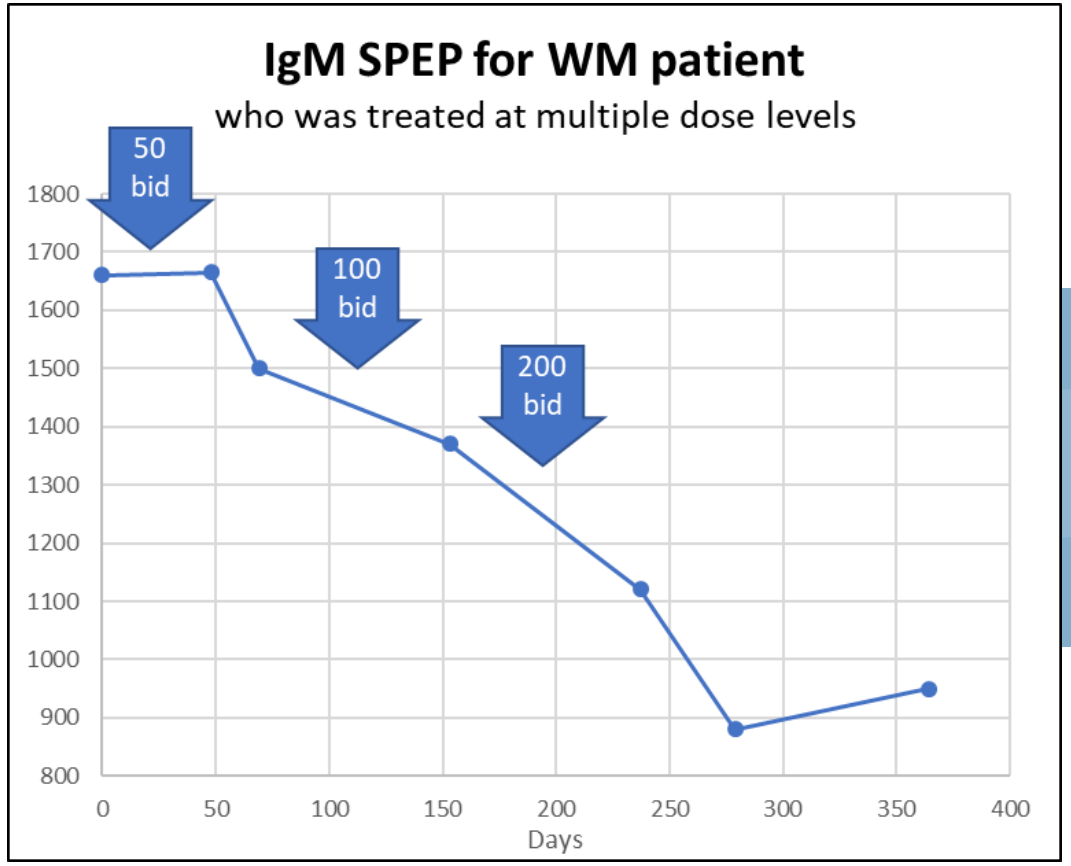


Dose Response Observed

5 of 6 patients experienced tumor reduction (avg reduction of 29%) as dose increased to therapeutic levels (200mg and higher)

CA-4948 in R/R Lymphoma

Single Agent Dose Response Observed as Phase 1 Study Advances to Therapeutic Dose Levels



Dose Response Observed

Increased tumor reduction observed as patient increased dose

CA-4948 in R/R Lymphoma

Combination with BTKi leads to Potent Anti-Cancer Activity in MYD88-altered DLBCL Models

Preclinical Anti-Cancer Activity

Potent as Single Agent

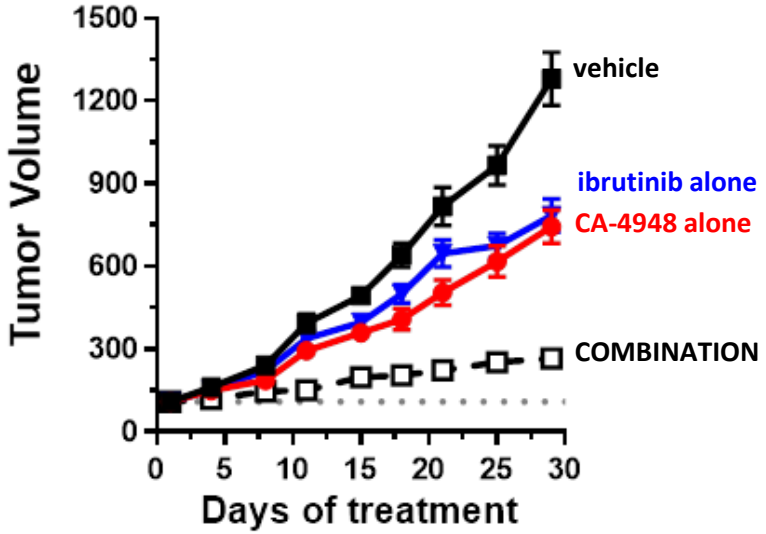
- Anti-cancer activity demonstrated in MYD88-altered DLBCL
- Interim readout in dose escalation study shows clear dose response
- We intend to continue dose escalation to further enhance efficacy until MTD / R2PD

Strong Synergy in Combination

- Anti-cancer activity demonstrated to be highly synergistic with BTK inhibition
- Evaluating potential clinical development strategies for CA-4948 with BTKi to assess anti-cancer activity

Preclinical Anti-Cancer Activity in MYD88-altered DLBCL[1]

(OCI-Ly10)



1) Data from Curis preclinical study; Booher, et al. 4th Waldenstrom Roadmap Symposium

CA-4948 in AML/MDS

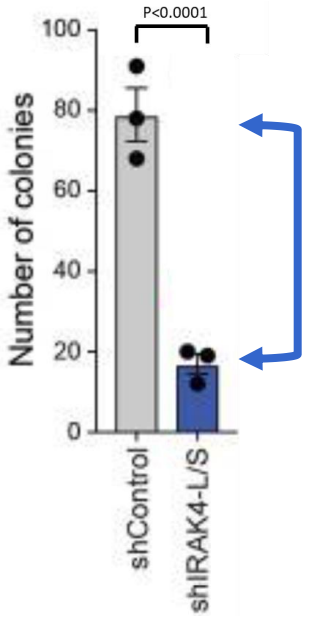
Additional Regulatory Path Identified in AML/MDS

Specific Genetic Mutations Lead to Expression of the Long Isoform of IRAK4 (IRAK4-L)

Oncogenic IRAK4-L, which is driven by spliceosome mutations (incl. SF3B1 and U2AF1), is preferentially expressed >50% of AML/MDS patients

IRAK4-L is Oncogenic

IRAK4-L provides a genetic link to oncogenic immune signaling in AML/MDS

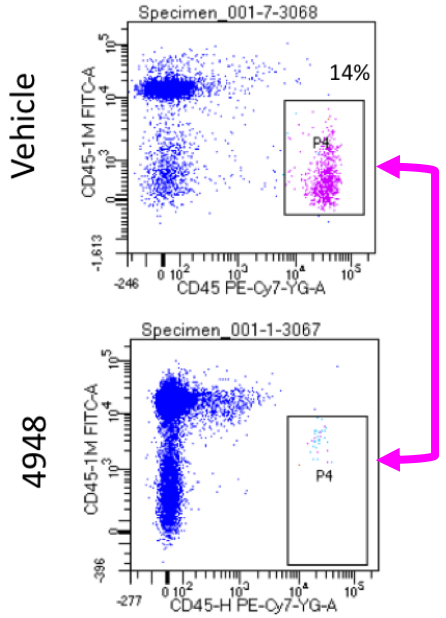


Blocking IRAK4-L reduces the formation of leukemia colonies in preclinical studies

Smith et al. Nat Cell Biol. 2019

CA-4948 Directly Targets IRAK4

Direct inhibition of the protein associated with disease (IRAK4) may offer a potential path to accelerated approval



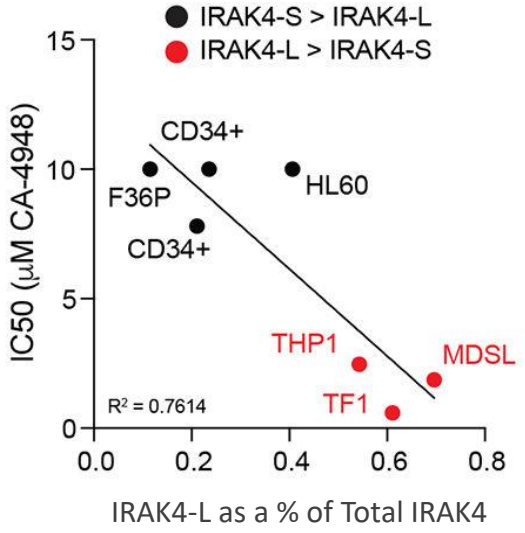
CA-4948 treatment reduces leukemic blasts in patient-derived xenografts

Choudhary et al. AACR 2017

CA-4948 in AML/MDS

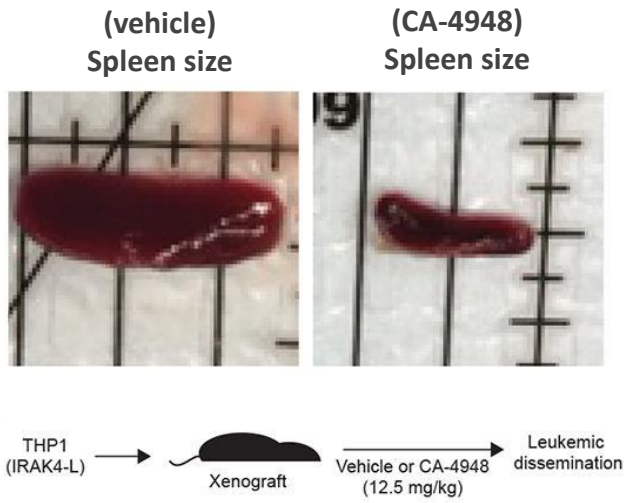
Preclinical data supporting opportunity in AML/MDS

Cell lines Overexpressing IRAK4-L Are More Sensitive to CA-4948



Smith et al. 2019

Xenografts Treated with CA-4948 Maintained Normal Spleen Size
(surrogate for leukemic burden)



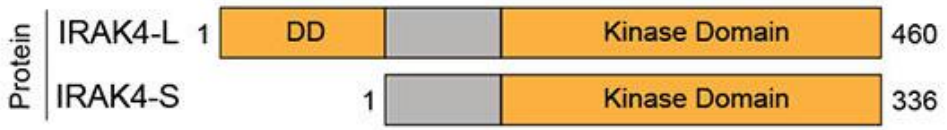
Smith et al. 2019

Treatment with CA-4948 Prevented Leukemic Engraftment in Almost All Xenografts

(% of mice)
Bone Marrow Engraftment

Vehicle	CA-4948
70%	10%

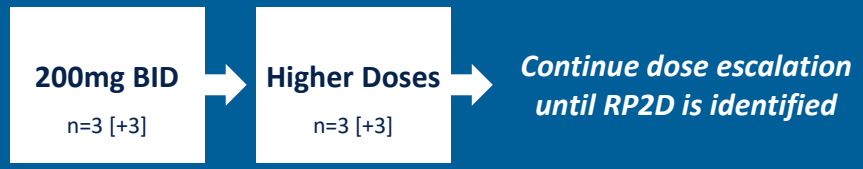
Smith et al. 2019



CA-4948 in AML/MDS

Phase 1 Study Design

FDA supports study initiation
at therapeutic dosing level (200mg BID)



Patient Population

- Patients with R/R AML and High Risk MDS

Treatment

- Oral, twice-daily (BID), dosing in continuous 28-day cycles

Objective

- Safety/tolerability during dose escalation
- Efficacy during expansion

Upcoming Milestones

- Initiate Ph1 study in Q2 2020
- Report initial data by end of 2020

Monoclonal Antibody Immune Checkpoint Inhibitor

CI-8993: In development for treatment of VISTA-expressing cancers

CI-8993 Overview

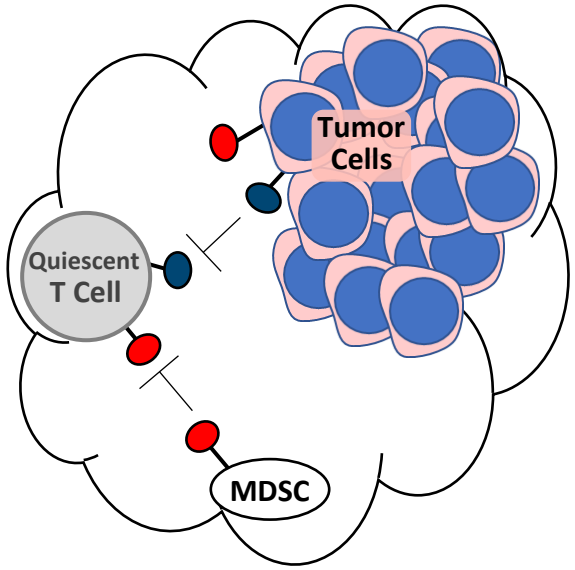
In Development for VISTA Expressing and Infiltrated Cancers

Profile	
Value Proposition	• First-in-class monoclonal antibody antagonist of VISTA • No anti-VISTA drugs currently in the clinic • Composition-of-matter IP extends into 2034
Population	• Patients with VISTA-expressing cancers (incl. Mesothelioma, NSCLC, and TNBC) • Patients receiving PD1/PDL1 or CTLA4 antibody therapy (or those who have already received it and have developed resistance to it)
Product Description	• Monoclonal antibody developed by ImmuNext/Janssen in partnership with Randy Noelle's lab at Dartmouth (the co-discoverer of VISTA)

CI-8993

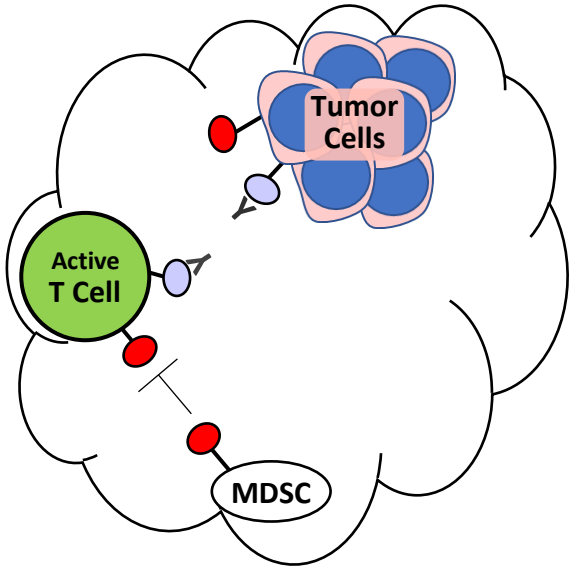
Role of VISTA in Immune Suppression

1
Immune Suppression
before PD-1 Treatment



Tumor Microenvironment

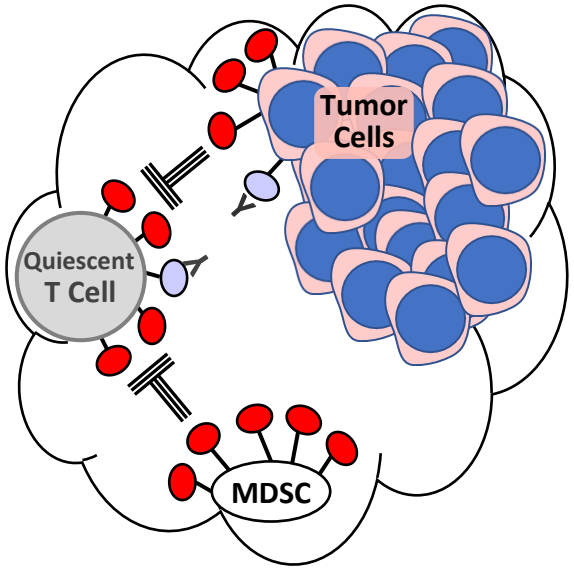
2
Temporary Immune Activation
after PD-1 Treatment



T cells Activated

Blocking PD-1 activates T cells in some patients

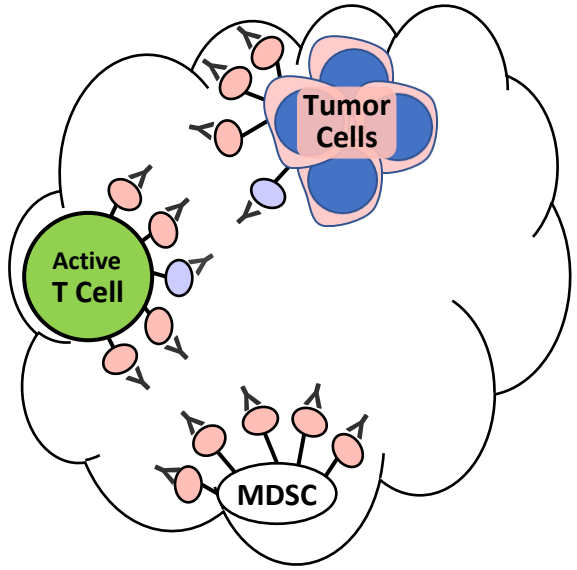
3
VISTA-mediated Immune Suppression
after PD-1 Treatment



T cells Suppressed

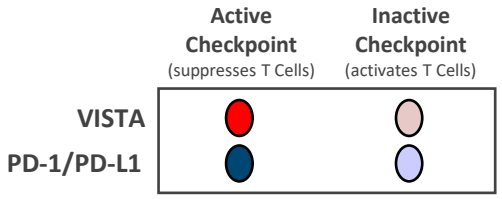
Blocking PD-1 causes up to 5x increase in VISTA expression and re-suppression of T cell activity[2]

4
Alleviation of Immune Suppression
after VISTA Treatment



T cells Re-Activated

Blocking VISTA re-activates anti-tumor immune function[1]



[1] Data from ImmuNext preclinical studies
[2] Gao et al. Nature. 2017. 23: 551–555

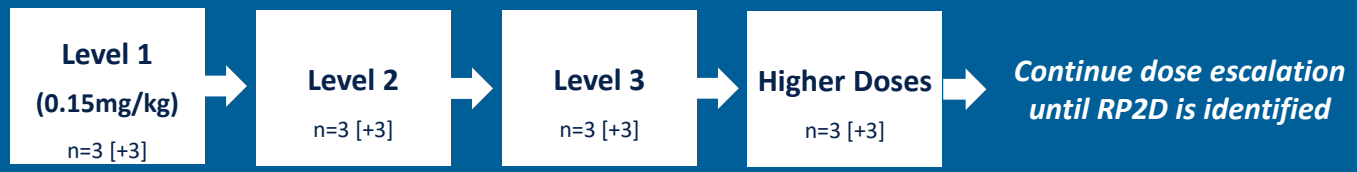
CI-8993 in Solid Tumors

Phase 1 Study Design

Upcoming Milestones

- IND accepted by FDA in Q2 2020
- Initiate trial in 2H 2020

IND accepted in June 2020



Patient Population

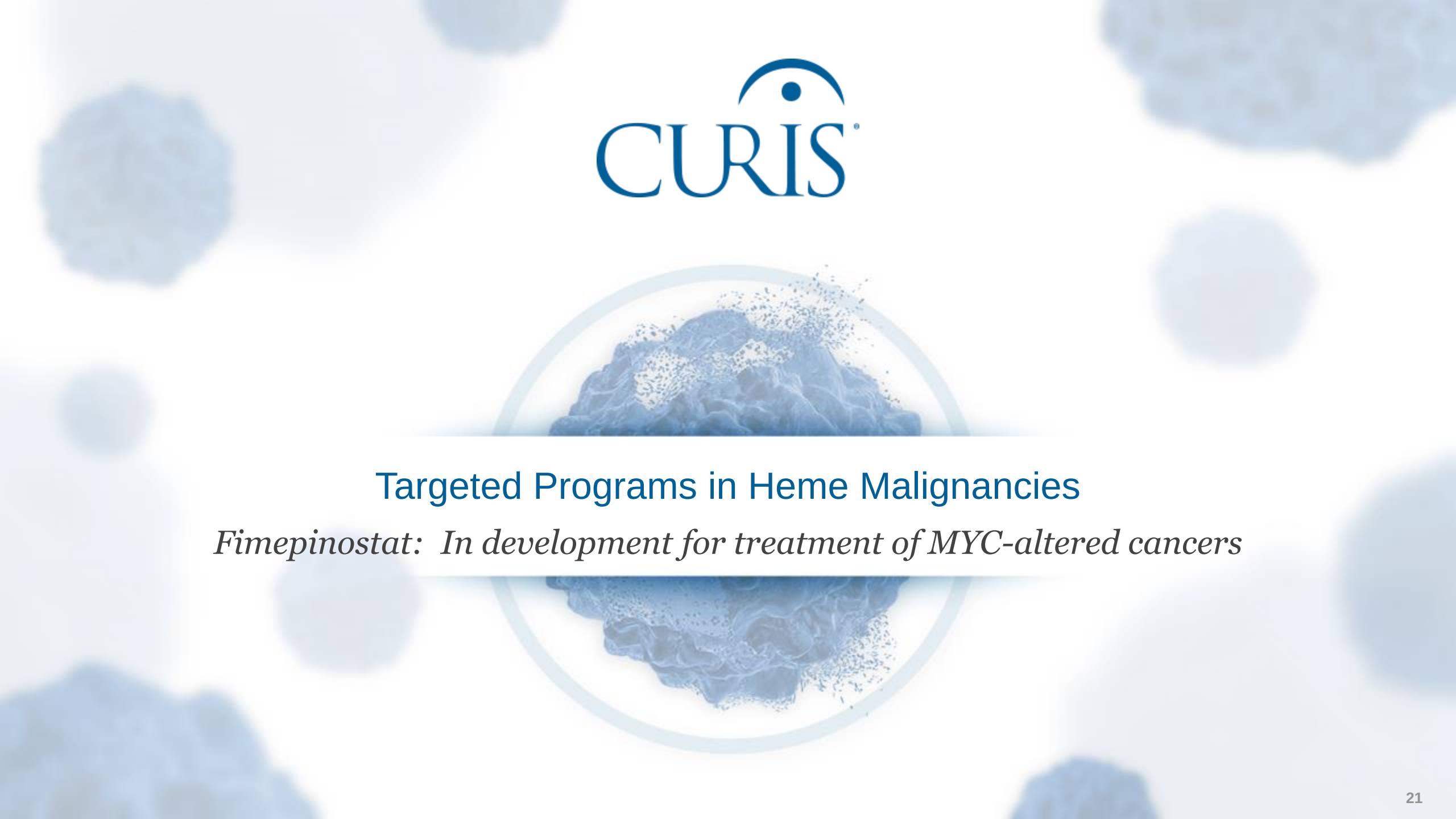
- Patients with advanced refractory solid tumors (includes mesothelioma, melanoma, NSCLC, TNBC)

Treatment

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

Objective

- Safety, PK/PD, tolerability during dose escalation
- Efficacy during expansion



Targeted Programs in Heme Malignancies

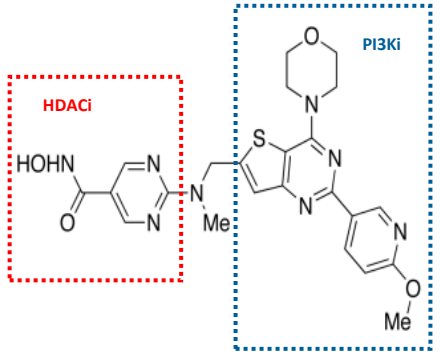
Fimepinostat: In development for treatment of MYC-altered cancers

Fimepinostat Overview

In Development for Patients with MYC-Altered Cancers

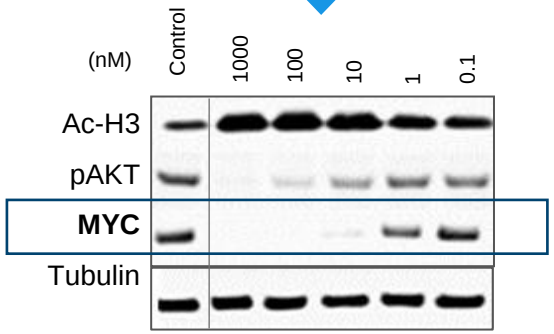
Profile	
Value Proposition	• First-in-class drug candidate with demonstrated anti-cancer activity as a single agent in MYC-altered patients in Ph1 and Ph2 trials • Composition-of-matter IP extends into 2032
Population	• Patients with MYC-altered cancer • (>50% of all cancers are effected by MYC)[3] • Collaborating with DarwinHealth on characterization of biomarkers and tumor type alignments to identify potential therapeutic opportunities
Product Candidate Description	• Potent and orally bioavailable dual inhibitor of HDAC and PI3K enzymes[1] • Favorable safety profile in over 200 patients

Mechanism #1
The HDAC component Suppresses MYC transcription[2]



Mechanism #2
The PI3K component Enhances MYC destruction[2]

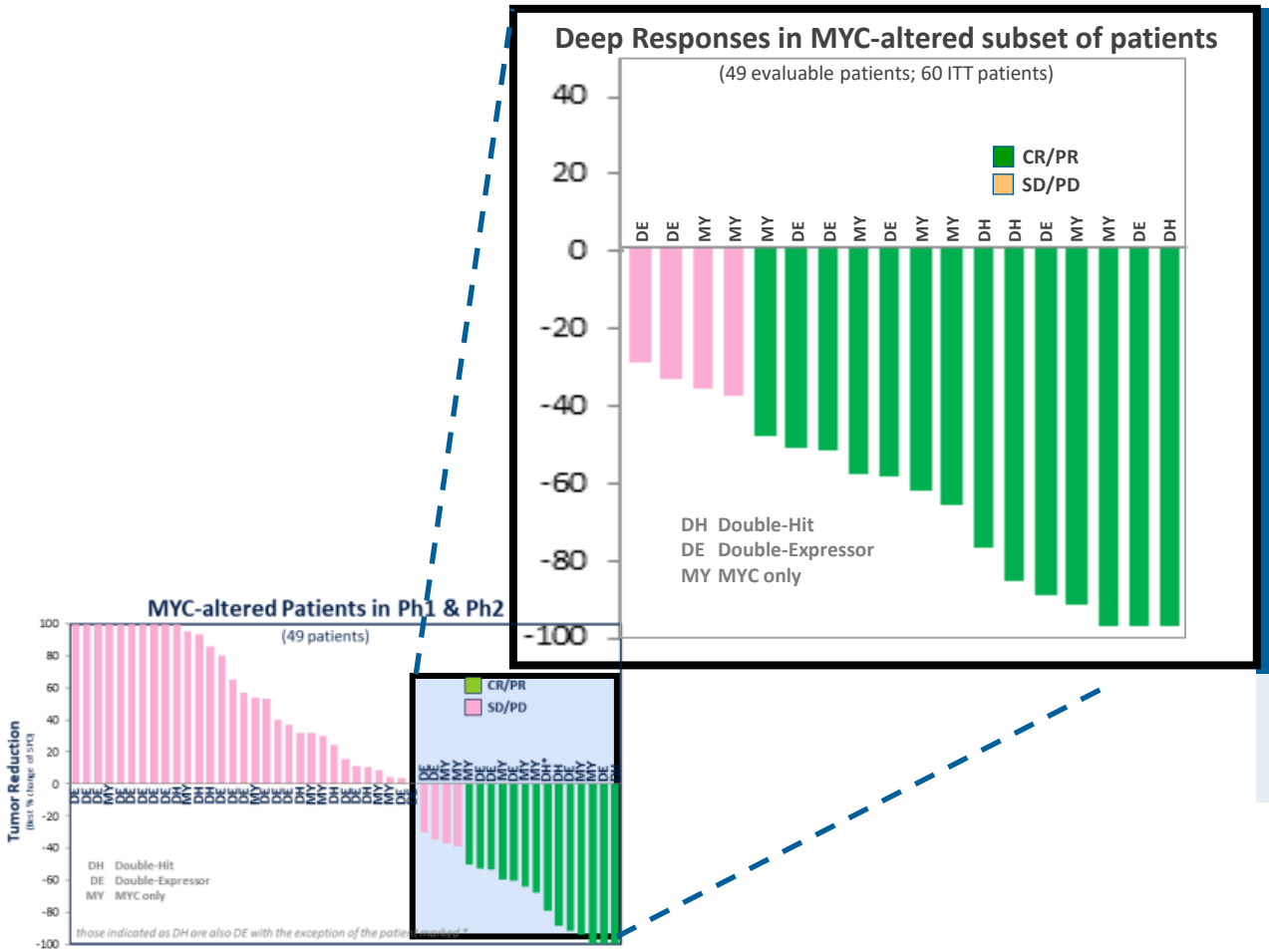
Dual Mechanism leads to potent and dose-dependent downregulation of MYC protein



Protein levels in DLBCL cells after treatment with Fimepinostat (Curis Preclinical Study)

1) Qian et.al. Clin Cancer Res. 2012. 18: 4104
2) Sun et.al. Mol Cancer Ther. 2017. 6: 285
3) Chen et al. Nature. 2018 Feb 23. 3:5

Fimepinostat Clinical Data Provides Strong Rationale For Development in MYC-Altered Lymphoma



Monotherapy Anti-Cancer Activity

Deep responses

- 8 complete responses (CR); 6 partial responses (PR)
- 2 patients able to proceed to transplant

Durable responses

- Median duration = 13.6 months

Fast Track designation received

- Following FDA review of clinical data

Evaluating potential therapeutic opportunities for fimepinostat in research collaboration with DarwinHealth

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* Fimepinostat: first-in-class suppressor of MYC *There are no drugs currently approved for MYC inhibition*
Potential Catalysts	2020: Updated efficacy data for CA-4948 Ph1 study in NHL 2H 2020: Initial efficacy data of CA-4948 Ph1 study in AML/MDS patients 2H 2020: Initiation of CI-8993 dose escalation Ph1 study

Curis

Leadership Team

Rachel Blasbalg
Head, Human Resources

James Dentzer
President & CEO

Christine Guertin
Head, Regulatory

Robert Martell
Head, R&D

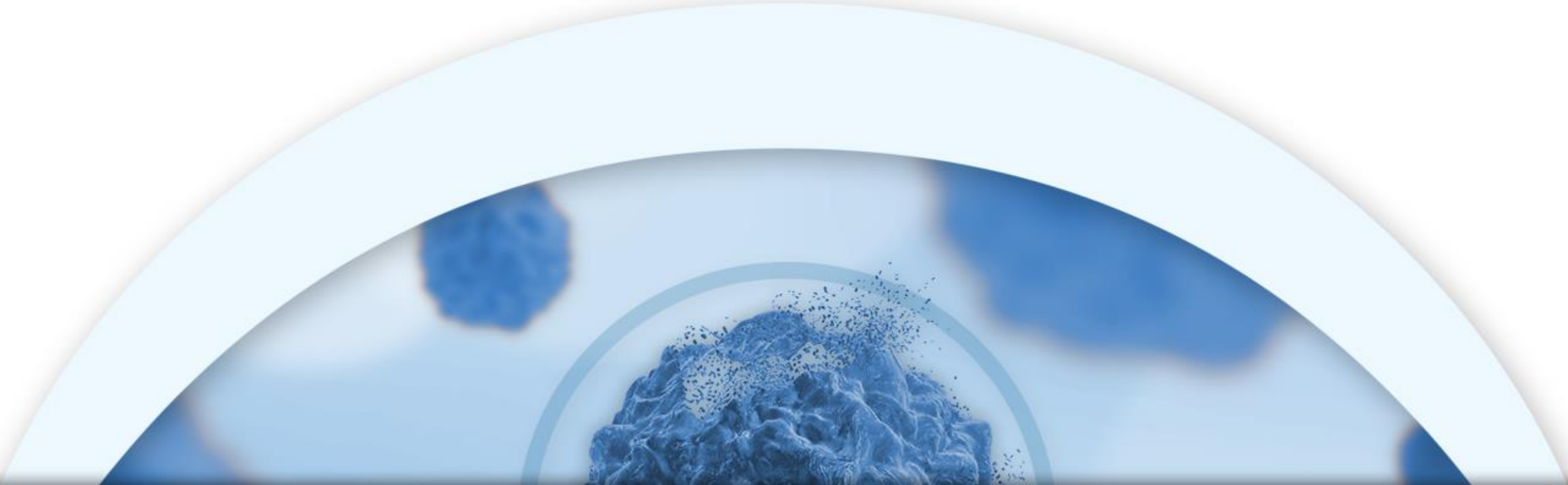
Mark Noel
Head, Intellectual Property

Reinhard von Roemeling
Head, Clinical Development

Raul Soikes
Head, Portfolio Management

Nancy Soohoo
General Counsel

William Steinkrauss
Chief Financial Officer

End of Corporate Presentation

NASDAQ: CRIS