



# FOGHORN<sup>®</sup>

## THERAPEUTICS

### CORPORATE OVERVIEW

---

Leveraging unique insights into the chromatin regulatory system to pioneer a new class of precision therapies in oncology and beyond

January 2023

## FORWARD LOOKING STATEMENTS

This presentation contains forward-looking statements. All statements other than statements of historical facts contained in this presentation are forward-looking statements. In some cases, you can identify forward-looking statements by terms such as “could,” “may,” “might,” “will,” “likely,” “anticipates,” “intends,” “plans,” “seeks,” “believes,” “estimates,” “expects,” “continues,” “projects” or the negative of these terms or other similar expressions, although not all forward-looking statements contain these words. Forward-looking statements include, but are not limited to, statements concerning: the potential outcomes from our collaboration agreements with Lilly and Merck; the initiation, timing, progress and results of our research and development programs and preclinical and clinical trials, including the potential resolution of the full clinical hold and anticipated timing of release of clinical data; our ability to advance product candidates that we may develop and to successfully complete preclinical and clinical studies; our ability to leverage our initial programs to develop additional product candidates using our Gene Traffic Control Platform; the impact of the COVID-19 pandemic and other exogenous factors on our and our collaborators’ business operations, including our research and development programs and preclinical studies; developments related to our competitors and our industry; our ability to expand the target populations of our programs and the availability of patients for clinical testing; our ability to obtain regulatory approval for FHD-286, FHD-609 and any future product candidates from the FDA and other regulatory authorities; our ability to identify and enter into future license agreements and collaborations; our ability to continue to rely on our CDMOs and CROs for our manufacturing and research needs; regulatory developments in the United States and foreign countries; our ability to attract and retain key scientific and management personnel; the scope of protection we are able to establish, maintain and enforce for intellectual property rights covering FHD-286 and FHD-609, our future products and our Gene Traffic Control Platform; and our use of proceeds from capital-raising transactions, estimates of our expenses, capital requirements and needs for additional financing. Any forward-looking statements represent the Company’s views only as of today and should not be relied upon as representing its views as of any subsequent date. The Company explicitly disclaims any obligation to update any forward-looking statements. The Company’s business is subject to substantial risks and uncertainties.

# FIRST-IN-CLASS PRECISION MEDICINES TARGETING MAJOR UNMET NEEDS IN CANCER



## LEADER IN NEW AREA OF CANCER BIOLOGY

Foghorn is a **leader in targeting chromatin biology**, which has unique potential to address underlying dependencies of many genetically defined cancers

Broad pipeline of **over 15 programs** across a range of targets and modalities



## LARGE MARKET POTENTIAL

Chromatin biology is implicated in up to **50% of tumors**, potentially impacting **~2.5 million patients**

Foghorn's current pipeline potentially addresses **more than 500,000** of these patients



## WELL-FUNDED

**\$374.5 million** in cash and equivalents  
*(as of 9/30/2022)*

Provides **runway into H2'2025**



## SIGNIFICANT VALUE DRIVERS IN 2023

Initial clinical data in uveal melanoma with **FHD-286** expected **H1'23**

Initial clinical data in synovial sarcoma with **FHD-609** expected **mid-2023**

AML/MDS study with FHD-286 on full clinical hold, development **clarity anticipated in H1'23**



## COLLABORATIONS WITH MAJOR ONCOLOGY PLAYERS

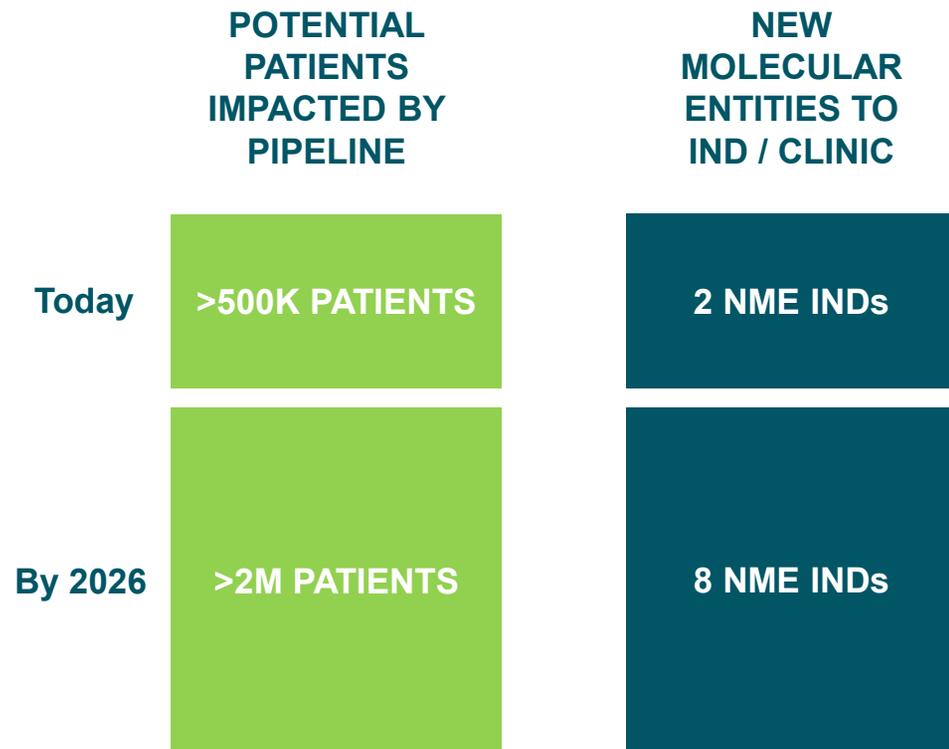
Strategic collaboration with Loxo Oncology at Lilly; **\$380 million upfront**; 50/50 U.S. economic split on two lead programs

Merck collaboration to drug single specified transcription factor target; **\$15 million upfront** and up to **\$410 million** in milestones

# FOGHORN: SIGNIFICANT VALUE CREATION OPPORTUNITIES

Potential Impact in >500K Patients Across More Than 20 Tumor Types with 6 Potential New INDs by 2026

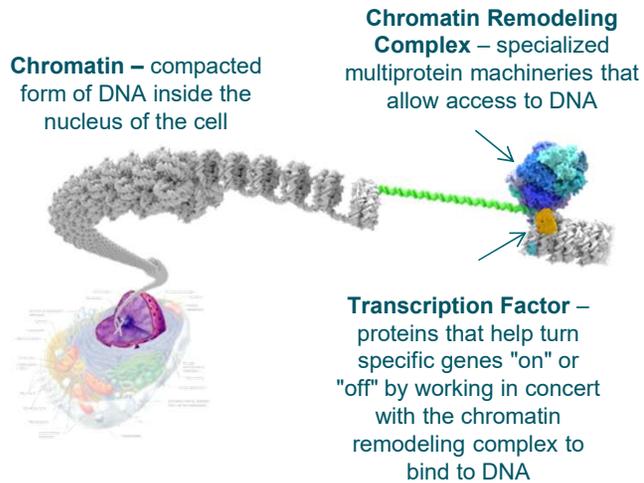
- Validated platform with first-in-class targets in the clinic (FHD-286 and FHD-609), with Phase 1 dose escalation data expected in H1 2023 for FHD-286 and mid-2023 for FHD-609
- At least **6** additional potential NME **INDs** by 2026
- **>20** genetically defined tumor types in **over 500K** patients – includes lung, prostate, bladder, ovarian, colorectal, breast
- Opportunity for additional partnerships



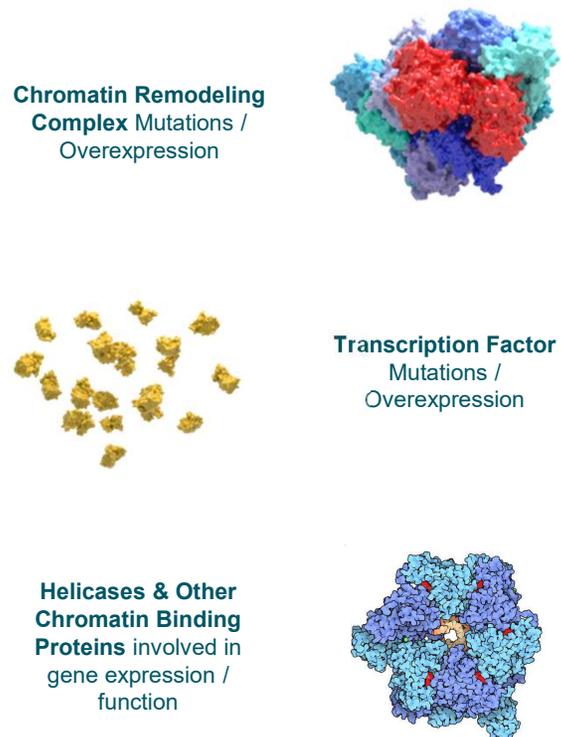
# UNIQUE INSIGHTS INTO CHROMATIN BIOLOGY

Untapped Area for Novel Targets and Therapeutics

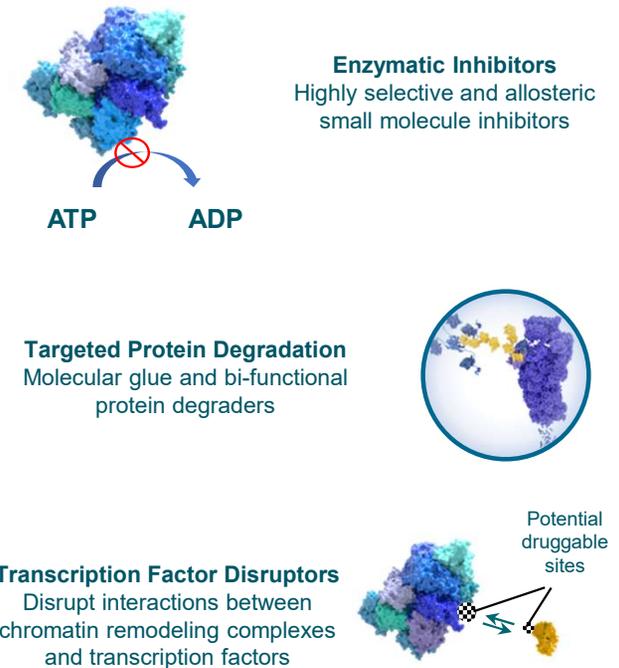
## CHROMATIN REGULATORY SYSTEM CRITICAL FOR GENE EXPRESSION



## NOVEL TARGETS GUIDED BY GENETIC DEPENDENCIES

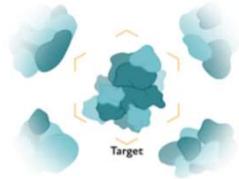


## TAILORED DRUGGING APPROACHES



# FOGHORN'S VALIDATED GENE TRAFFIC CONTROL® PLATFORM

Integrated, Scalable, Efficient – Repeatable Paradigm

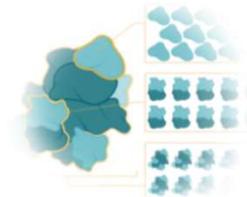


## UNIQUE TARGETS

Deep Mechanistic Understanding of the Chromatin Regulatory System

### What to Drug:

Identify disease dependencies



## SPECIALIZED APPROACH

Biochemistry, Biophysics and Assays of Large Complexes and Proteins

### Where to Drug:

Engineer selectivity via unique assays and protein capabilities



## SELECTIVE THERAPEUTICS

Small Molecule and Degradation Platform

### How to Drug:

Biology first - small molecule modality agnostic

Enzymatic Inhibitors

Targeted Protein Degraders

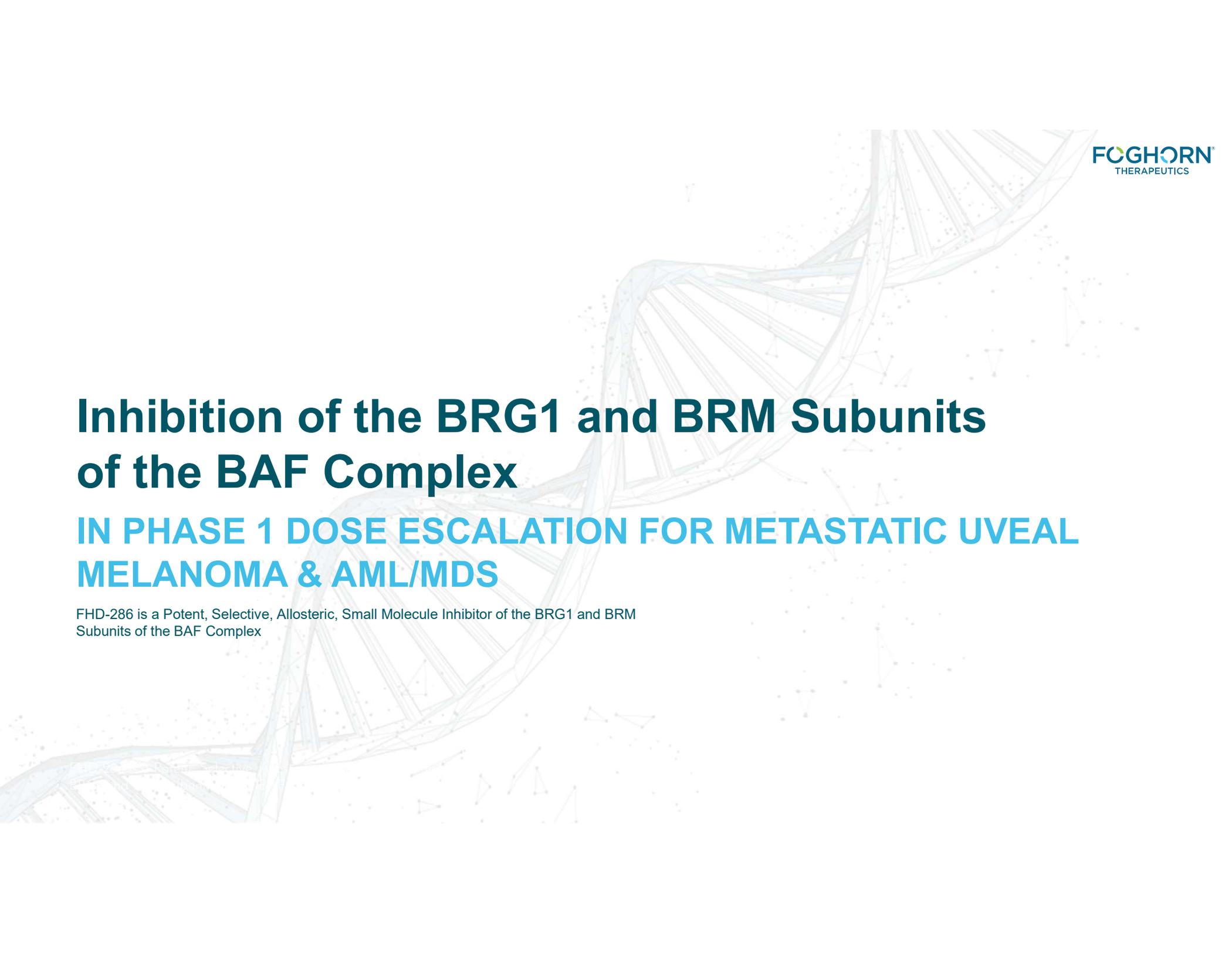
Transcription Factor Disruptors

# BROAD PIPELINE ACROSS A RANGE OF TARGETS AND MODALITIES

Precision Oncology / Breadth and Depth / Over 15 Programs

Modality	Program	Discovery	Phase 1	Phase 2	Phase 3	Commercial Rights	Patient Population*
Enzyme Inhibitors	FHD-286 (BRG1/BRM)	AML & MDS				FOGHORN THERAPEUTICS	Over 27,000
	FHD-286 (BRG1/BRM)	Uveal Melanoma				FOGHORN THERAPEUTICS	Over 5,000
	Selective BRM	BRG1 Mutated Cancers, e.g., NSCLC & Bladder				LOXO FOGHORN THERAPEUTICS	Over 100,000
Protein Degraders	FHD-609 (BRD9)	Synovial Sarcoma & SMARCB1-Loss Tumors				FOGHORN THERAPEUTICS	Over 2,800
	Selective BRM	BRG1 Mutated Cancers, e.g., NSCLC & Bladder				LOXO FOGHORN THERAPEUTICS	Over 100,000
	Selective ARID1B	ARID1A Mutated Cancers, e.g., Ovarian, Endometrial & Colorectal				FOGHORN THERAPEUTICS	Over 175,000
	Selective CBP	EP300 Mutated Cancers, e.g., Prostate, Bladder, Colorectal, Breast				FOGHORN THERAPEUTICS	Over 100,000
Transcription Factor Disruptors	Undisclosed	Undisclosed				FOGHORN THERAPEUTICS	
	Undisclosed	Undisclosed				MERCK	
Partnered Program	Undisclosed	Undisclosed				LOXO FOGHORN THERAPEUTICS	
	3 Discovery Programs	3 Undisclosed Programs				LOXO FOGHORN THERAPEUTICS	

\* Incidence in the U.S., EU5, Japan

A large, light blue, wireframe-style DNA double helix structure is positioned diagonally across the background of the slide, extending from the bottom left towards the top right.

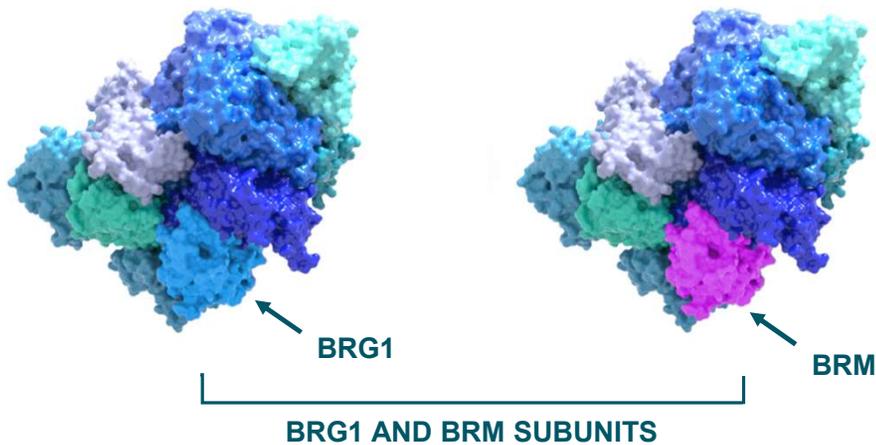
# **Inhibition of the BRG1 and BRM Subunits of the BAF Complex**

## **IN PHASE 1 DOSE ESCALATION FOR METASTATIC UVEAL MELANOMA & AML/MDS**

FHD-286 is a Potent, Selective, Allosteric, Small Molecule Inhibitor of the BRG1 and BRM Subunits of the BAF Complex

# TARGETING BAF DEPENDENCY IN CANCER

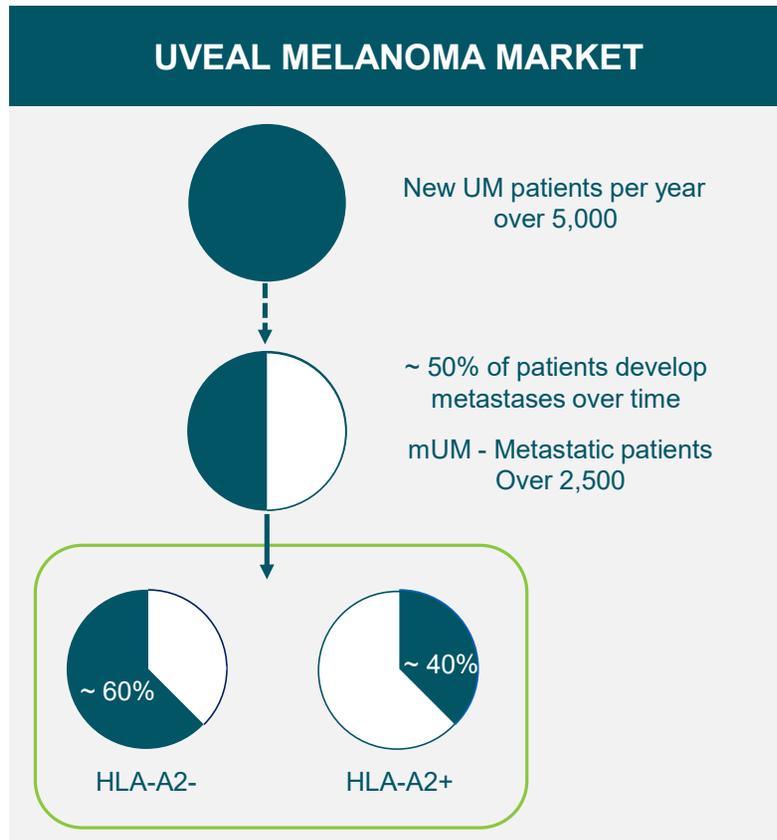
## BAF CHROMATIN REMODELING COMPLEX



- BRM / BRG1 is the engine (ATPase) of the BAF chromatin remodeling complex
- Dependency on BRM / BRG1 is **well-established with multiple tumor types**, including uveal melanoma, AML / MDS, NSCLC and prostate
- Foghorn's lead asset targeting BRM / BRG1, **FHD-286, is a potent, selective, allosteric, small molecule inhibitor of the BRG1 and BRM subunits** of the BAF complex
- In Phase 1 dose escalation for uveal melanoma & AML / MDS

# SIGNIFICANT UNMET NEED IN UVEAL MELANOMA

Most Common Form of Eye Cancer



## UVEAL MELANOMA OVERVIEW

### Market Opportunity:

- Over 2,500 new metastatic UM patients impacted per year in the U.S. / over 5,000 U.S. and E.U.
- Potential additional opportunity in the adjuvant and neo-adjuvant settings

### Limited Treatment Options:

- Treatment options include enucleation, checkpoint inhibitors, KIMMTRAK and chemotherapy/radiation
- KIMMTRAK is indicated for HLA-A2+ haplotype (~40% of the metastatic patient population)

# FHD-286 FOR METASTATIC UVEAL MELANOMA

## Clinical Development Plan

### PHASE 1 DOSE ESCALATION STUDY

- 3+3 cohort design
- Retrospective biomarker analysis to further evaluate safety and efficacy
- Assess safety, PK, biomarkers and therapeutic activity
- Identify dose(s) for expansion

### PHASE 1 EXPANSION STUDIES

- Evaluate identified dose(s)
- Consider refined patient population, if necessary
- Consider exploration of combination partners
- Assess safety, PK, biomarkers and therapeutic activity

### POTENTIAL DEFINITIVE EFFICACY TRIALS & INDICATION EXPANSION

- Potential for entry into definitive efficacy trials in metastatic UM
- Potential for indication expansion

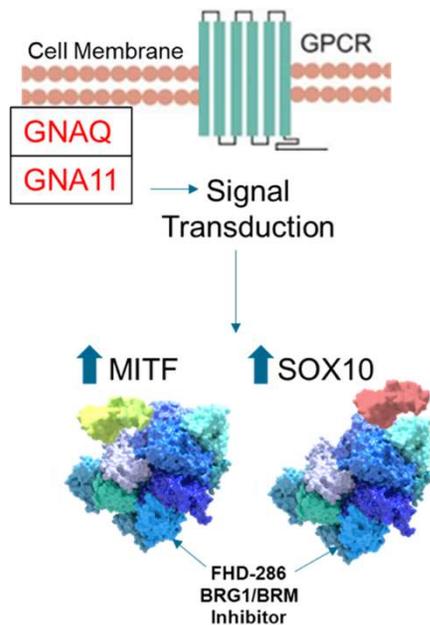
Initial clinical data in uveal melanoma with FHD-286 expected H1'23

# THERAPEUTIC RATIONALE FOR UVEAL MELANOMA

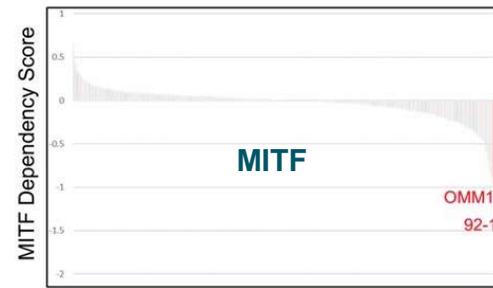
Dependency on Two Lineage Transcription Factors: MITF / SOX10

## BIOLOGY

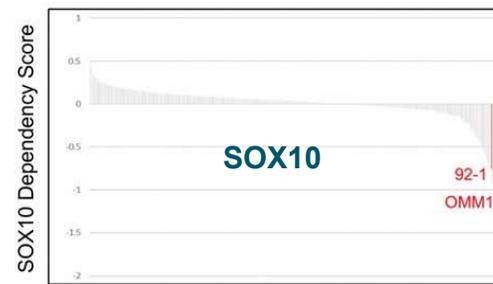
OVER 85% OF UVEAL MELANOMA CANCERS HAVE GNAQ OR GNA11 MUTATIONS



## VALIDATION OF DEPENDENCY AND APPROACH

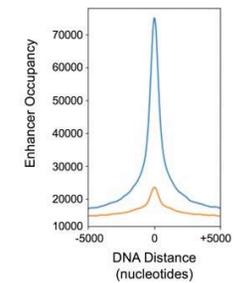


CANCER CELL LINES

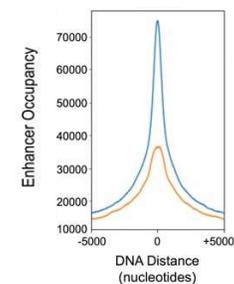


CANCER CELL LINES

## MITF CHIPseq



## SOX10 CHIPseq



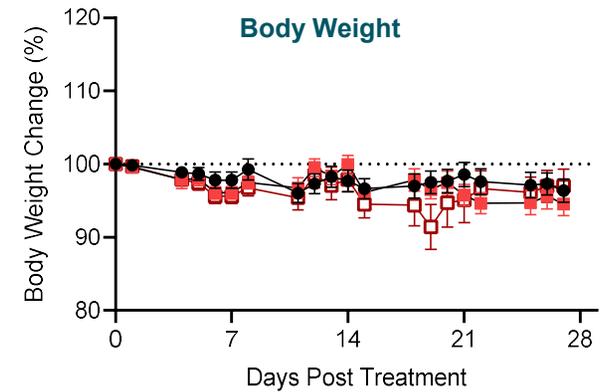
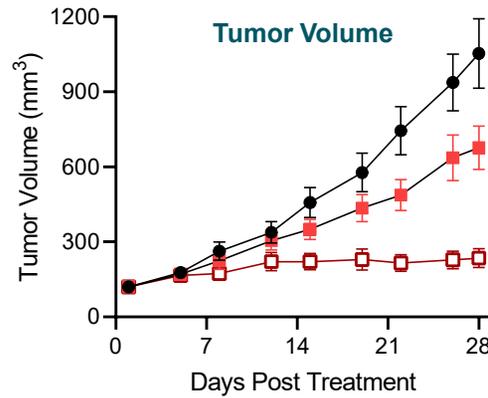
— DMSO Control  
— BRG1/BRM Tool Cmpd

# DOSE-DEPENDENT TUMOR REGRESSION IN UVEAL MELANOMA CDX MODELS AT TOLERATED DOSES WITH FHD-286

## MP-46 UVEAL MELANOMA CDX MODEL

Dose-dependent tumor growth inhibition

Well-tolerated

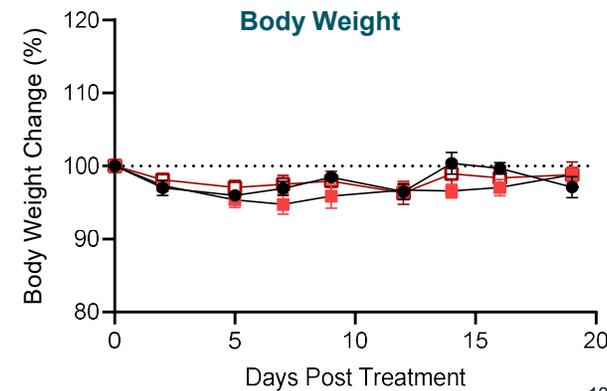
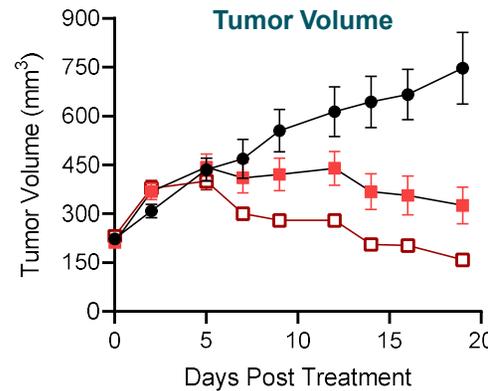


## 92-1 UVEAL MELANOMA CDX MODEL

Dose-dependent tumor growth inhibition

Tumor regression at 1.5 mg / kg, PO, QD

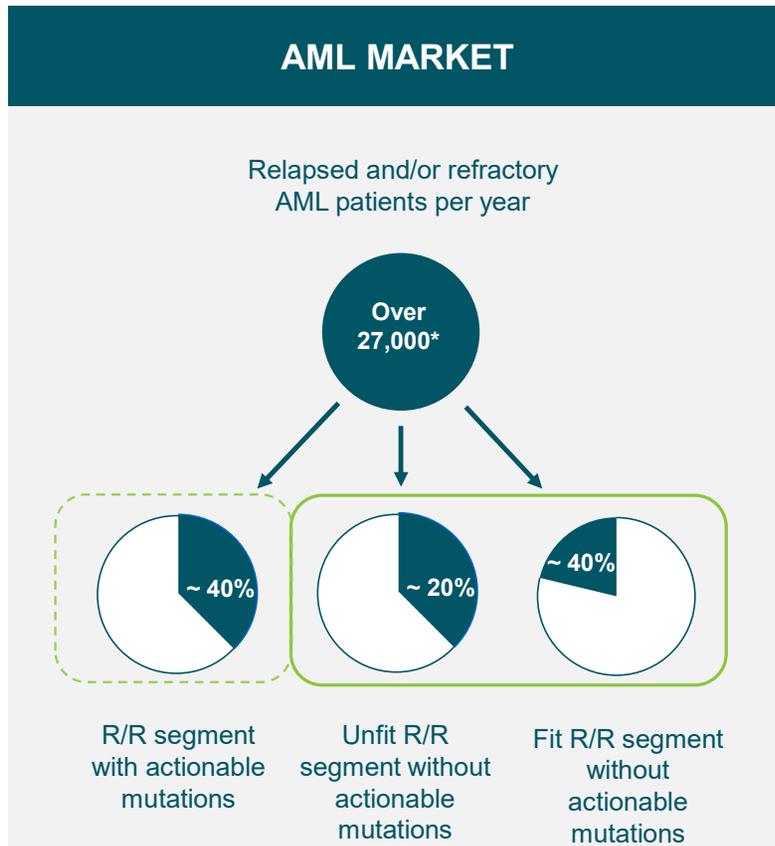
Well-tolerated



● Vehicle    ■ FHD-286, 0.5 mg/kg, PO, QD    □ FHD-286, 1.5 mg/kg, PO, QD

# SIGNIFICANT UNMET NEED REMAINS IN R/R AML & MDS

Most Common Type of Acute Leukemia in Adults



## AML OVERVIEW

### Mutation:

- Elevated BRG1-BAF / TF activity in AML blast cells

### Market Opportunity:

- Over 27,000 relapsed and/or refractory patients impacted per year\*

### Treatment Options:

- Limited options for relapsed and/or refractory patients without actionable mutations

\* Incidence in the U.S., EU5, Japan

# FHD-286 FOR RELAPSED/REFRACTORY AML & MDS

## Clinical Development Plan

### PHASE 1 DOSE ESCALATION STUDY

- 3+3 cohort design
- Retrospective biomarker analysis to further evaluate safety and efficacy
- Assess safety, PK, biomarkers and therapeutic activity
- Identify dose(s) for expansion

### PHASE 1 EXPANSION STUDIES

- Evaluate identified dose(s)
- Consider refined patient population if necessary
- Consider exploration of combination partners
- Assess safety, PK, biomarkers and therapeutic activity

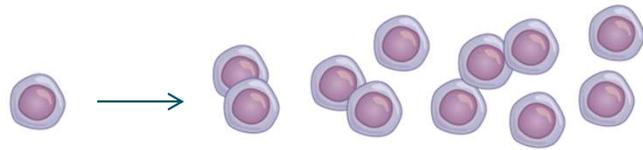
### POTENTIAL DEFINITIVE EFFICACY TRIALS & INDICATION EXPANSION

- Potential for entry into definitive efficacy trials in AML / MDS
- Potential for indication expansion

**AML / MDS study with FHD-286 on full clinical hold, development clarity anticipated in H1'23**

# AML: DEPENDENCY ON BRG1 / LINEAGE TF INTERACTIONS

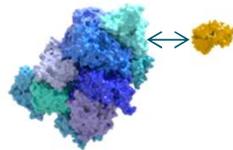
## DISEASE STATE



HSC

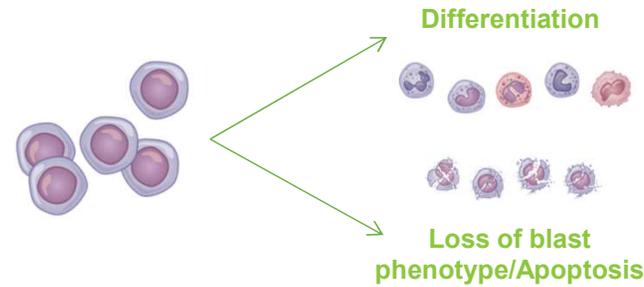
AML blasts stuck in BAF / TF dependent proliferative phase

Cancerous blast cells rely on BRG1 containing BAF / TF activity



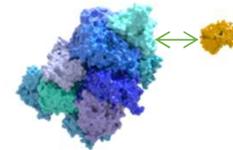
BAF - TF activity

## TREATMENT WITH FHD-286



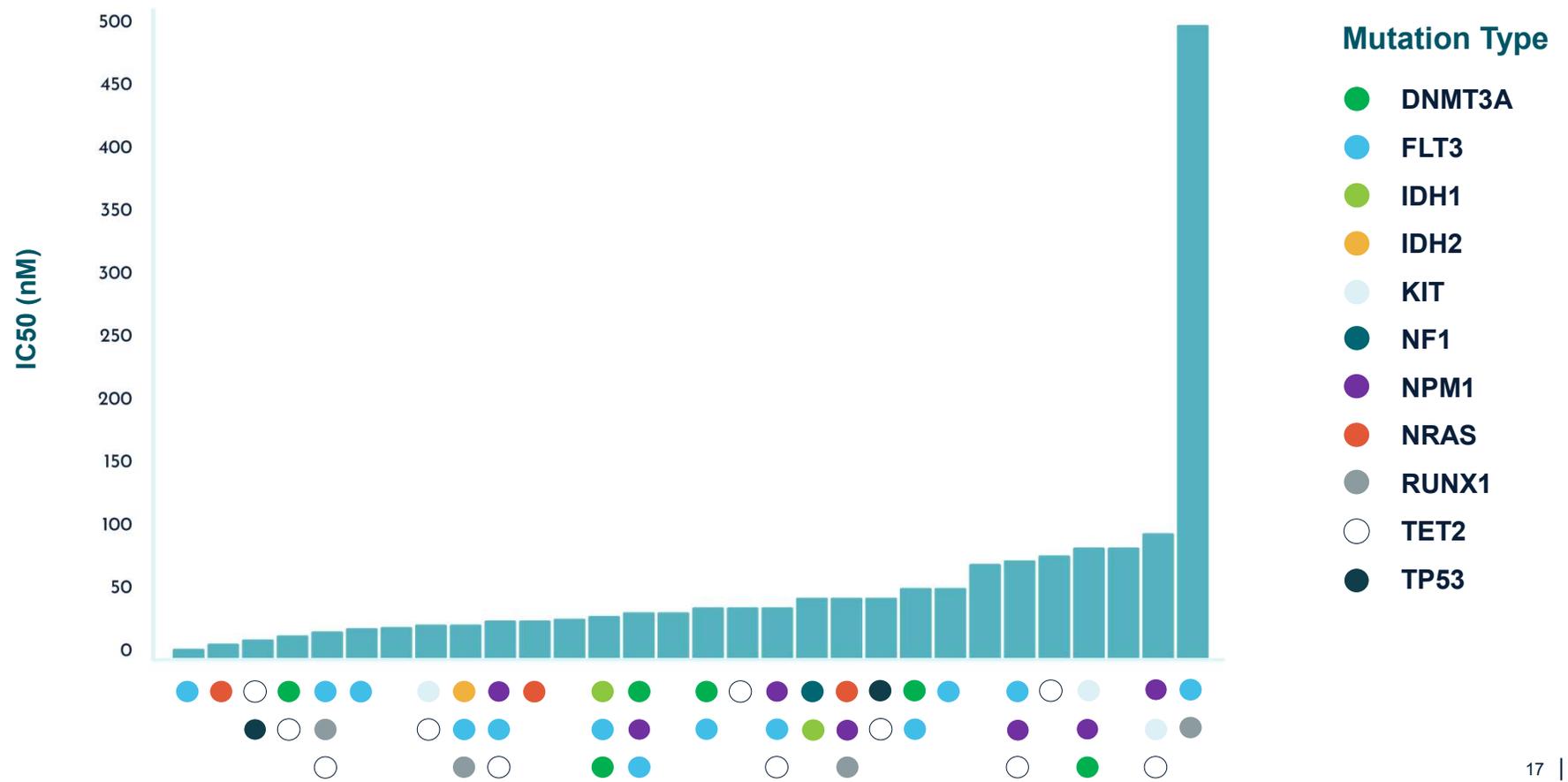
Differentiation

Loss of blast phenotype/Apoptosis



BAF - TF activity

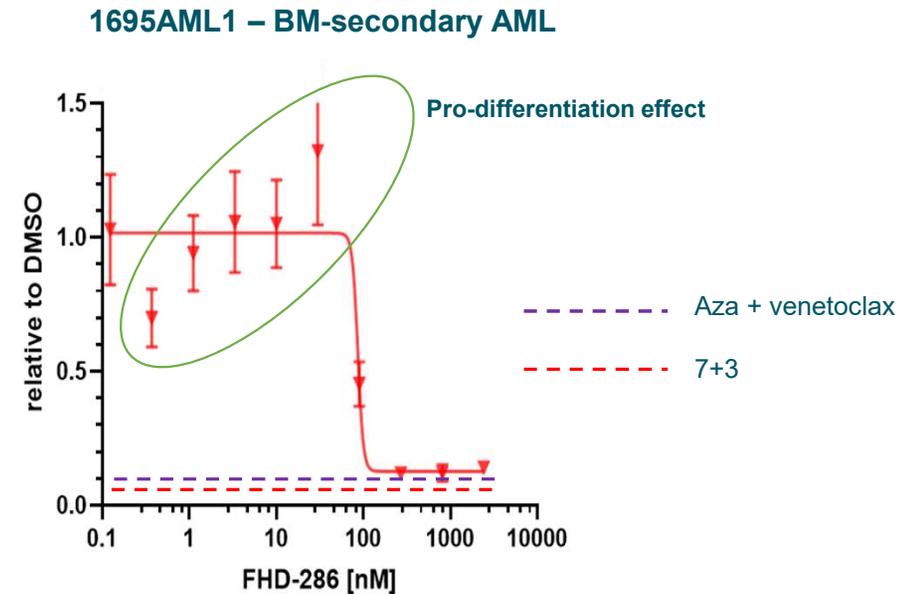
# FHD-286 SHOWS EFFECT ACROSS A BROAD RANGE OF MUTATIONS IN AML PATIENT-DERIVED SAMPLES



# PRECLINICAL FHD-286 DATA SHOWS EFFICACY ACROSS AML PATIENT-DERIVED SAMPLES

Notable Patient ID	Deep Response	Pathology Review	Disease Status
1690AML1	Y	AML	Secondary
1695AML1	Y	AML/MDS	Secondary
1696AML1	Y	AML	Secondary
1701AML1	Y	AML	Secondary
1893AML1	Y	AML	R/R
1899AML1	Y	AML	R/R
1990pAML1	Y	AML	R/R
1991pAML1	Y	AML	de novo
2041AML1	Y	N/A	de novo
2043pAML1	Y	AML	R/R
2059AML1	Y	AML	R/R
1682AML1	~	N/A	N/A
1689AML1	~	AML/MDS	de novo
1684AML1	N	CML	R/R
1924AML1	N	AML/MDS	R/R

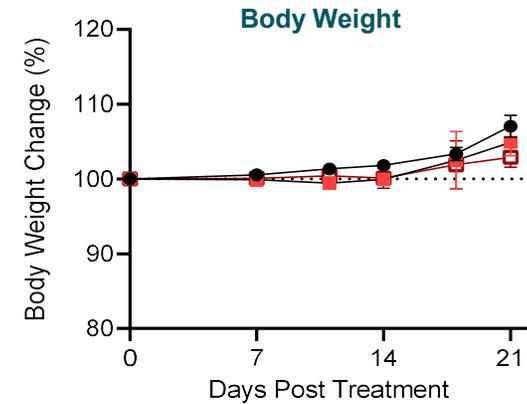
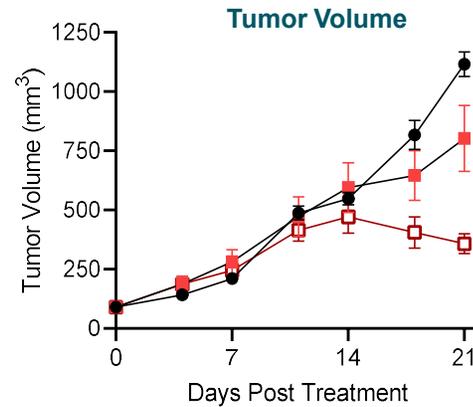
Y = Deep reduction in blast cells    ~ = Partial reduction    N = No response



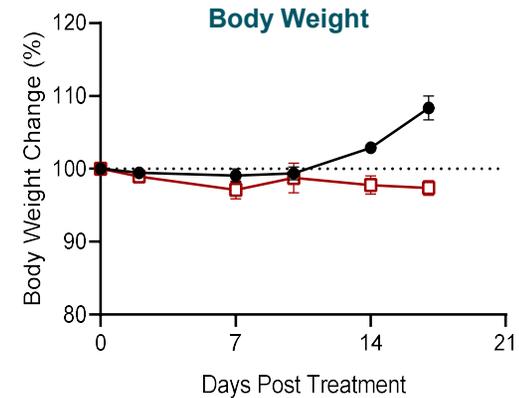
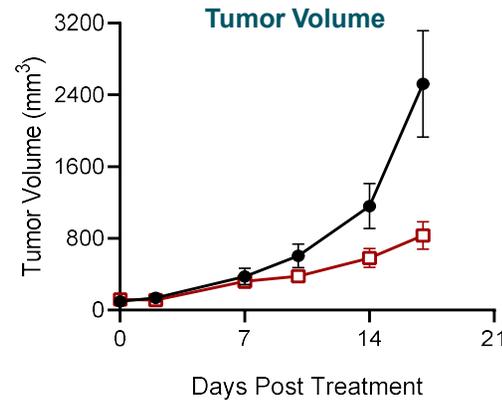
- Response observed in a majority of primary AML samples, irrespective of prior treatment or disease stage
- Additional data set from patient-derived samples demonstrates mutation-agnostic responses

# DOSE-DEPENDENT TUMOR GROWTH INHIBITION OBSERVED WITH FHD-286 TREATMENT IN AML CDX MODELS

**MV4-11 CDX Model  
(FLT3 ITD, MLL-AF4)**



**OCI-AML2 CDX MODEL  
(MII-AF6, DNMT3A MUT.)**

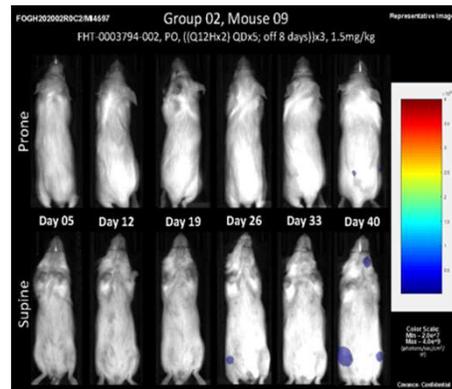
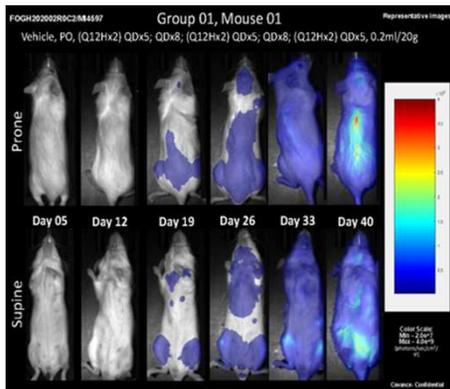


● Vehicle    ■ FHD-286, 0.5 mg/kg, PO, QD    □ FHD-286, 1.5 mg/kg, PO, QD

# TUMOR GROWTH INHIBITION WITH FHD-286 TREATMENT OBSERVED BY BIOLUMINESCENCE

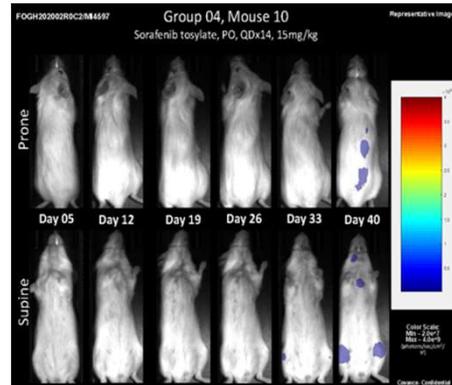
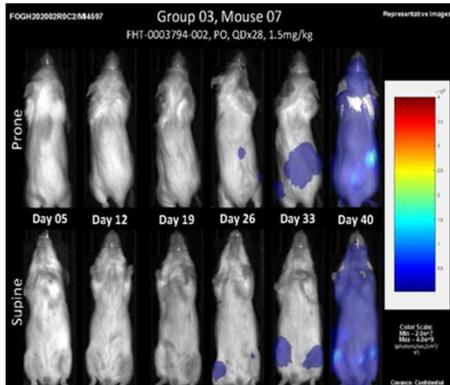
Imaging in a Disseminated AML Model

VEHICLE



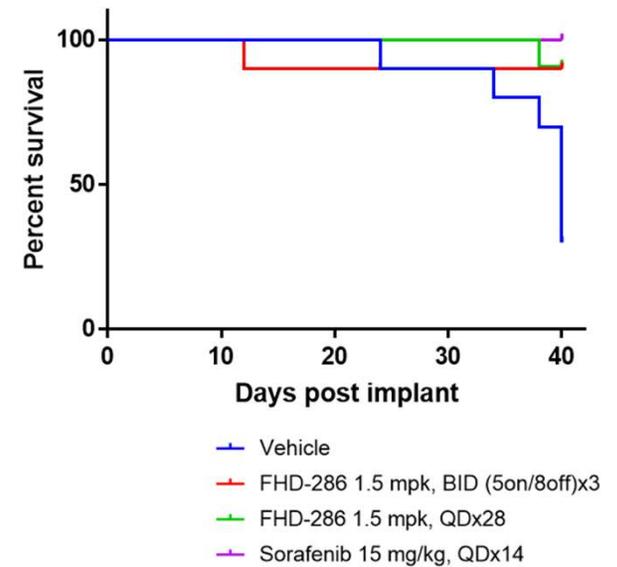
FHD-286  
1.5 MG / KG, BID  
(5ON / 8OFF) X3

FHD-286  
1.5 MG / KG  
QDX28



SORAFENIB  
15 MG / KG,  
QDX14

## FHD-286 SURVIVAL ADVANTAGE IN DISSEMINATED AML MODEL



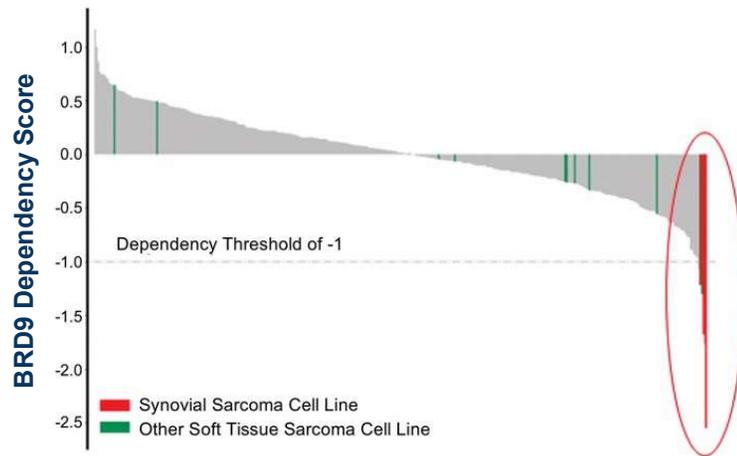
# Degrading the BRD9 Subunit of the BAF Complex

## IN PHASE 1 DOSE ESCALATION FOR SYNOVIAL SARCOMA AND SMARCB1-LOSS TUMORS

FHD-609 is a Selective, Potent, Protein Degradator of the BRD9 Component of the BAF Complex

# DEGRADING THE BRD9 SUBUNIT OF BAF

## BRD9 IS REQUIRED FOR THE SURVIVAL OF SYNOVIAL SARCOMA CELLS

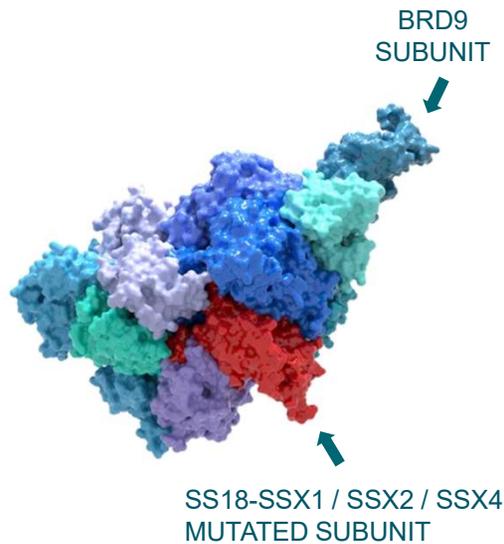


**CANCER CELL LINES**  
Project DRIVE shRNA data

- Dependency on BRD9 **well established with multiple tumor types** including synovial sarcoma and SMARCB1-loss tumors
- Foghorn's lead asset targeting BRD9, **FHD-609**, selective, potent, protein degrader **of the BRD9 subunit** of the BAF complex
- In Phase 1 dose escalation for synovial sarcoma and SMARCB1-loss tumors

# SIGNIFICANT UNMET NEED IN SYNOVIAL SARCOMA

Synovial Sarcoma Accounts for ~10% of Soft-Tissue Sarcoma Tumors



**TARGETED PROTEIN DEGRADATION  
TO REGULATE CHROMATIN AND  
GENE EXPRESSION IN DISEASE**

## SYNOVIAL SARCOMA & SMARCB1-LOSS TUMORS OVERVIEW

- **Mutation:** 100% of patients harbor SS18-SSX1 / SSX2 / SSX4 protein fusions
- **Patient Numbers\*:**
  - Synovial sarcoma: Over 1,800
  - SMARCB1-Loss Tumors: ~1,000
- **Limited Treatment Options:**
  - No approved therapies
  - Current standard of care includes surgical resection, chemotherapy/radiation and pazopanib
  - Adaptimmune's cell therapy in development for synovial sarcoma, only applicable to ~25% of patient population

\* Incidence in the U.S., EU5, Japan

# FHD-609 FOR METASTATIC SYNOVIAL SARCOMA AND SMARCB1-LOSS TUMORS

## Clinical Development Plan

### PHASE 1 DOSE ESCALATION STUDY

- 3+3 cohort design
- Assess safety, PK, therapeutic activity, target engagement and biomarkers
- Identify dose(s) for expansion
- Biomarkers: SS18-SSX1, SS18-SSX2 or SS18-SSX4 translocation for synovial sarcoma

### PHASE 1 EXPANSION STUDIES

- Metastatic synovial sarcoma expansion cohorts
- SMARCB-1 deleted tumors and potentially other indications
- Evaluate identified dose(s)
- Consider refined patient population if necessary
- Consider exploration of combination partners
- Assess safety, PK, biomarkers and therapeutic activity

### POTENTIAL DEFINITIVE EFFICACY TRIALS & INDICATION EXPANSION

- Potential for entry into definitive efficacy trials in metastatic synovial sarcoma
- Potential for indication expansion beyond metastatic synovial sarcoma

Initial clinical data in synovial sarcoma with FHD-609 expected mid-2023

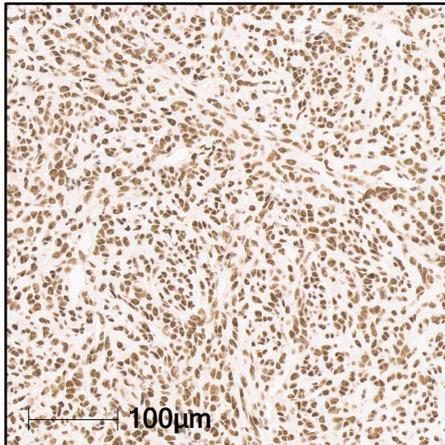


# ON-TREATMENT TUMOR BIOPSIES WITH FHD-609 DEMONSTRATE TARGET ENGAGEMENT WITH DEGRADATION OF BRD9

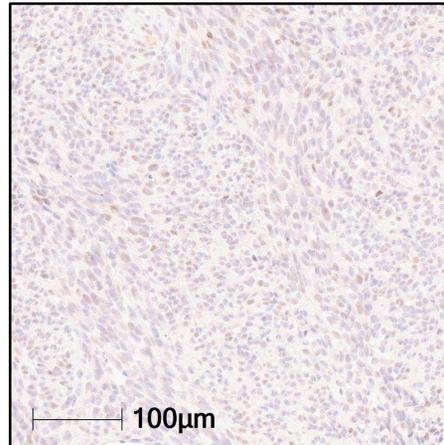
SIGNIFICANT BRD9 DEGRADATION OF ~60-70% WITH LOW DOSE OF FHD-609

Paired Biopsies Patient A

Pre-Treatment

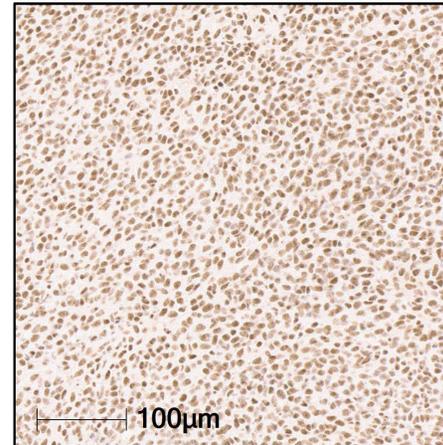


On-Treatment

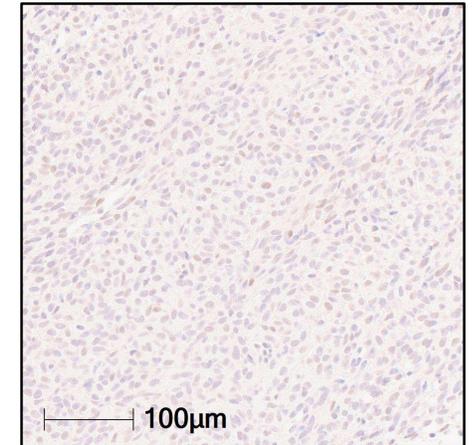


Paired Biopsies Patient B

Pre-Treatment



On-Treatment

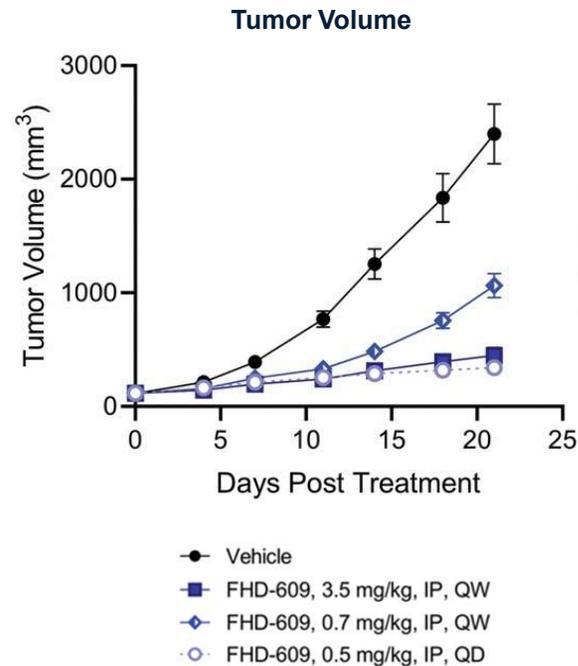


# ROBUST *IN VIVO* ACTIVITY OBSERVED IN SYNOVIAL SARCOMA MODEL AND BRD9 DEGRADATION ASSOCIATED WITH FHD-609 TREATMENT

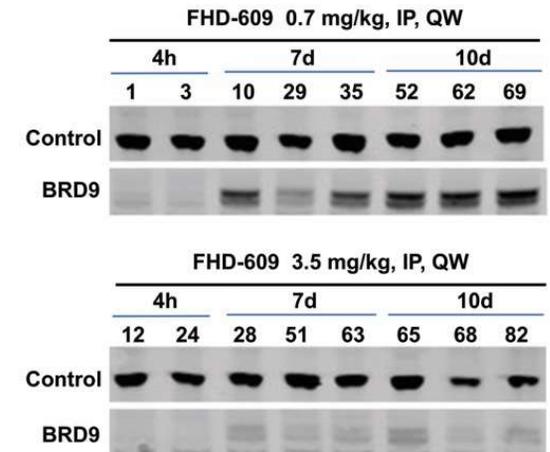
Weekly Dosing of FHD-609 Achieved Sustained BRD9 Degradation

## SY01 SYNOVIAL SARCOMA CDX MODEL

- Mutation: **SS18-SSX2**
- Inhibited tumor growth
- Dose-dependent BRD9 degradation correlated with anti-tumor activity



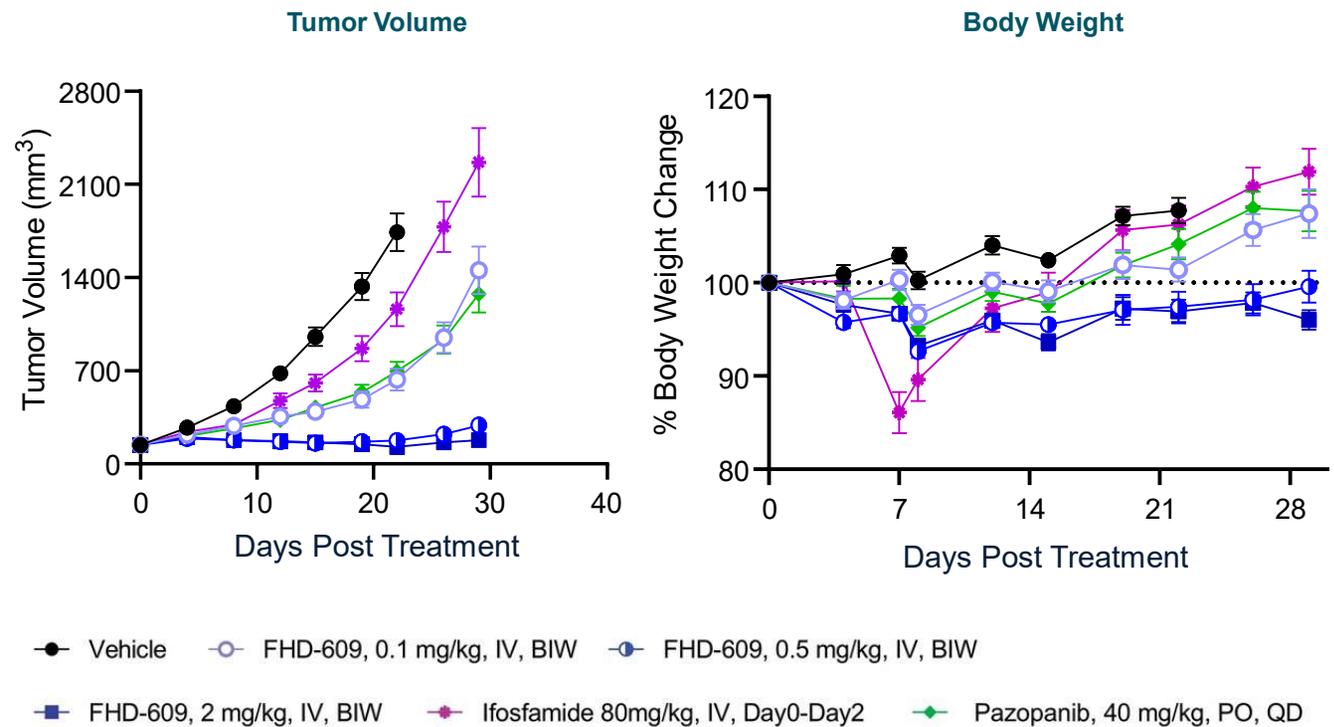
## SUSTAINED BRD9 DEGRADATION



# SUPERIOR TUMOR GROWTH INHIBITION WITH FHD-609 IN A SYNOVIAL SARCOMA MODEL AS COMPARED TO IFOSFAMIDE AND PAZOPANIB

## ASKA CDX MODEL

- Mutation: **SS18-SSX1**
- Superior tumor growth inhibition compared to ifosfamide and pazopanib
- Complete suppression observed over 30 days at 2 mg / kg of FHD-609

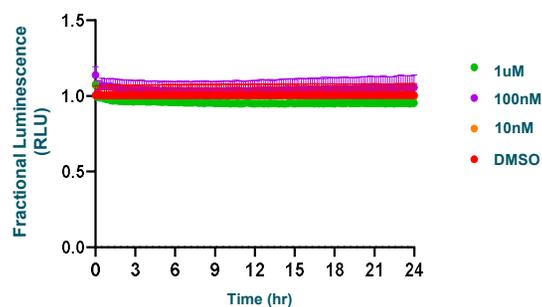


# FHD-609 IS HIGHLY SELECTIVE

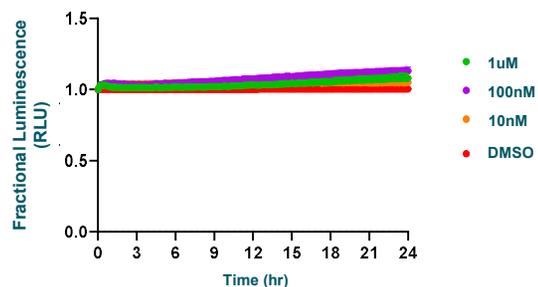
No Off-Target IMiD Neosubstrate Degradation Activity Observed

## KINETIC DEGRADATION PROFILING

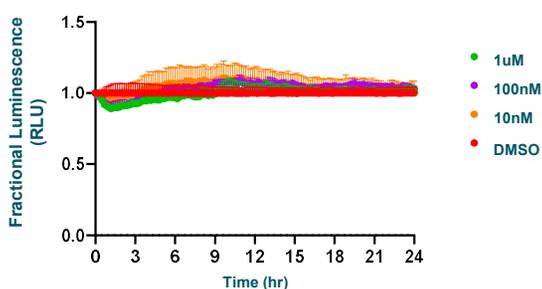
### HiBiT-GSPT1



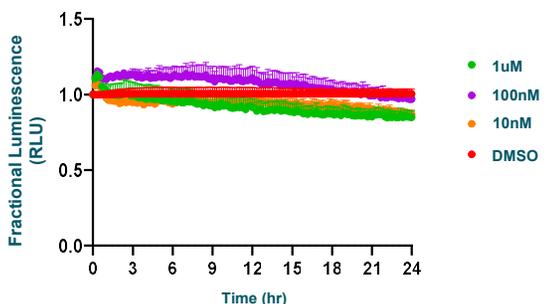
### HiBiT-CSNK1A1



### HiBiT-IKZF1

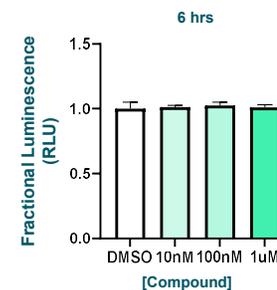


### HiBiT-IKZF2

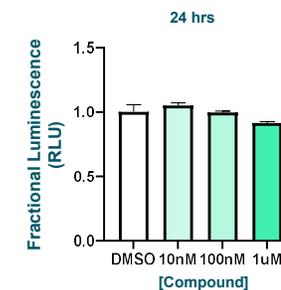


## ENDPOINT DEGRADATION PROFILING

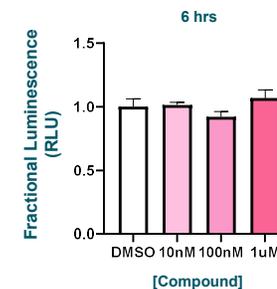
### HiBiT-IKZF3



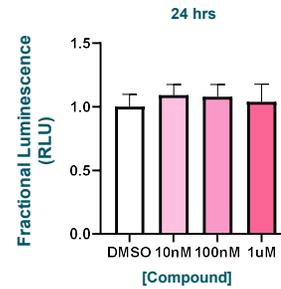
### HiBiT-IKZF3



### HiBiT-SALL4



### HiBiT-SALL4



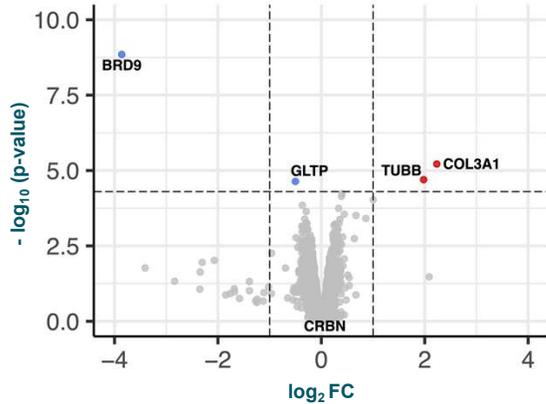
# FHD-609 SELECTIVELY DEGRADES BRD9 IN SYNOVIAL SARCOMA GLOBAL PROTEOMICS ANALYSES

BRD9 Is the Only Protein Significantly Degraded at Multiple Concentrations and Time Points

16nM (200x DC50)  
4hrs in SYO1

FHD-609 16nM 4h

Enhanced Volcano

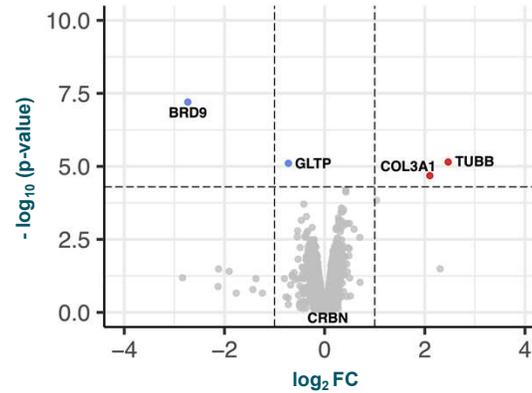


Total = 7,437

78nM (1000x DC50)  
4hrs in SYO1

FHD-609 78nM 4h

Enhanced Volcano

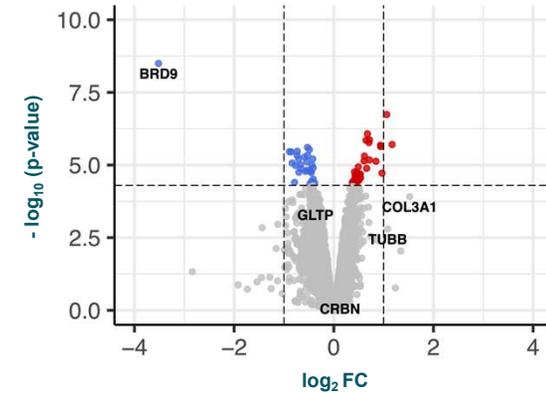


Total = 7,437

16nM (200x DC50)  
24hrs in SYO1

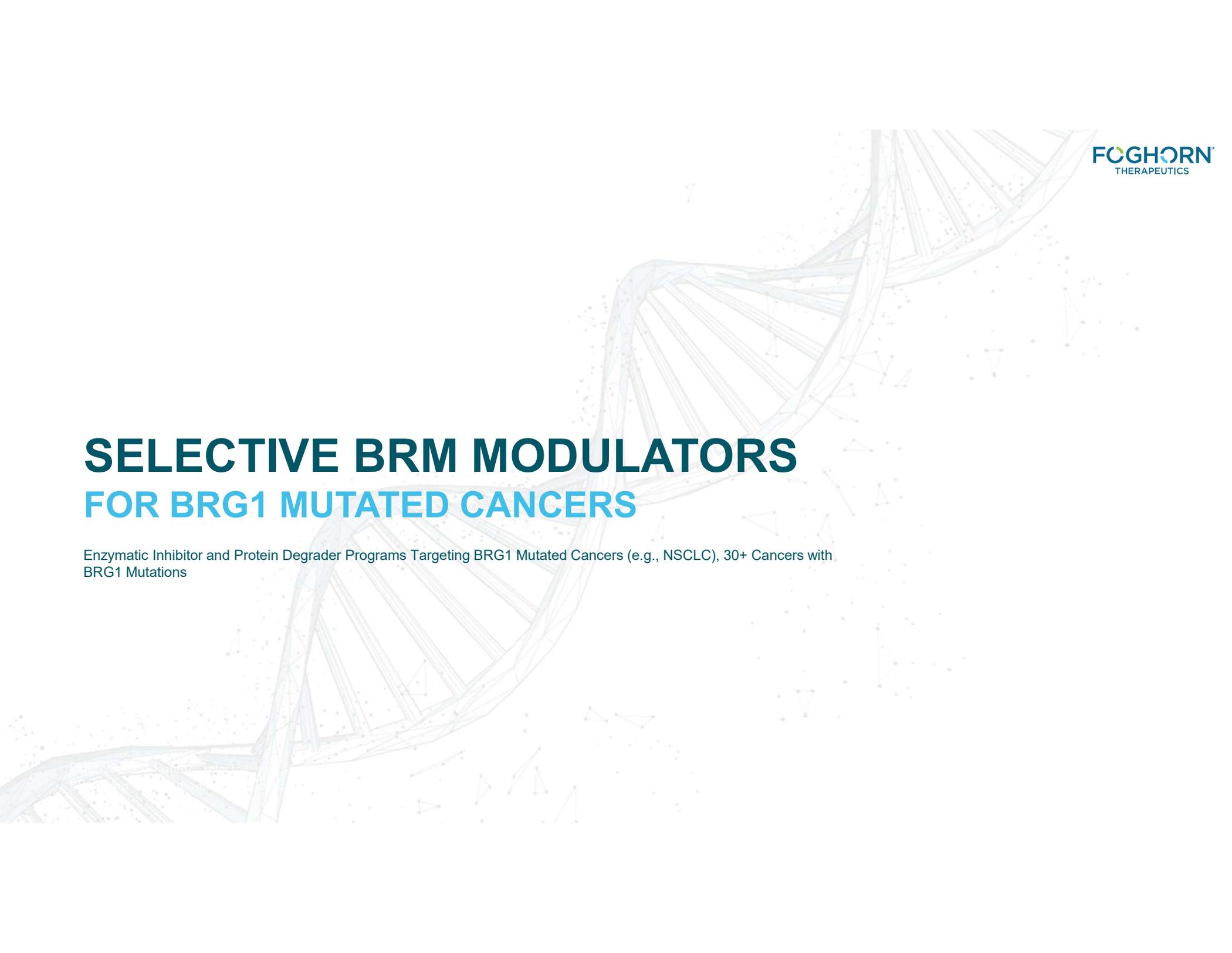
FHD-609 16nM 24h

Enhanced Volcano



Total = 7,437

● negative FC  
● positive FC  
● not significant



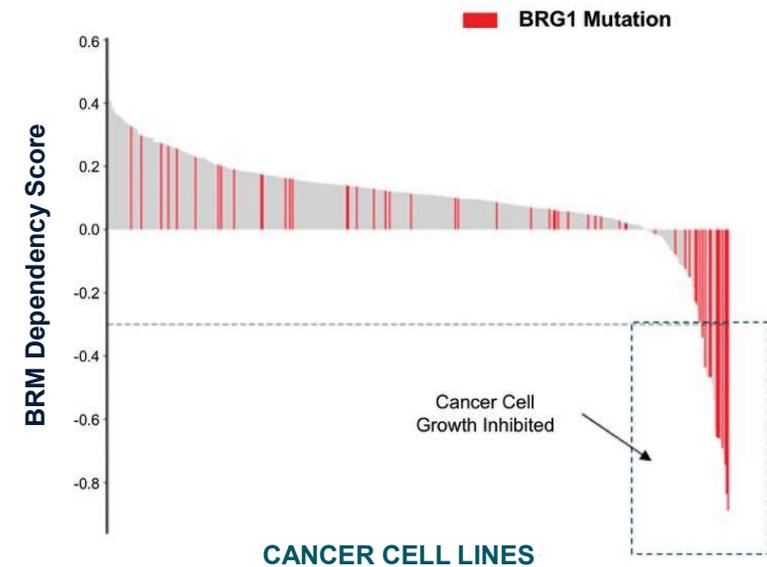
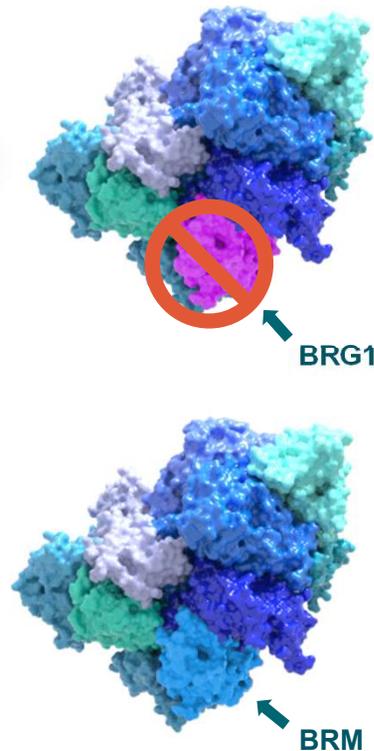
# **SELECTIVE BRM MODULATORS** **FOR BRG1 MUTATED CANCERS**

Enzymatic Inhibitor and Protein Degradation Programs Targeting BRG1 Mutated Cancers (e.g., NSCLC), 30+ Cancers with BRG1 Mutations

# BRG1 MUTATIONS CREATE A GENETIC DEPENDENCY ON BRM

## Selective BRM Modulators Overview

<b>Target / Approach</b>	<ul style="list-style-type: none"> <li>BRM</li> <li>Enzymatic inhibitor</li> <li>Targeted protein degrader</li> </ul>
<b>Indications</b>	<ul style="list-style-type: none"> <li>BRG1 mutated cancers (e.g., NSCLC), 30+ cancers with BRG1 mutations</li> </ul>
<b>Mutation / Aberration</b>	<ul style="list-style-type: none"> <li>BRG1</li> </ul>
<b>Stage</b>	<ul style="list-style-type: none"> <li>Pre-clinical</li> </ul>
<b>New Patients Impacted / Year*</b>	<ul style="list-style-type: none"> <li>&gt; 100,000</li> </ul>
<b>Economics of Lilly Collaboration</b>	<ul style="list-style-type: none"> <li>50/50 U.S. economics</li> <li>Tiered ex-U.S. royalties starting in the low double-digit range and escalating into the twenties</li> </ul>

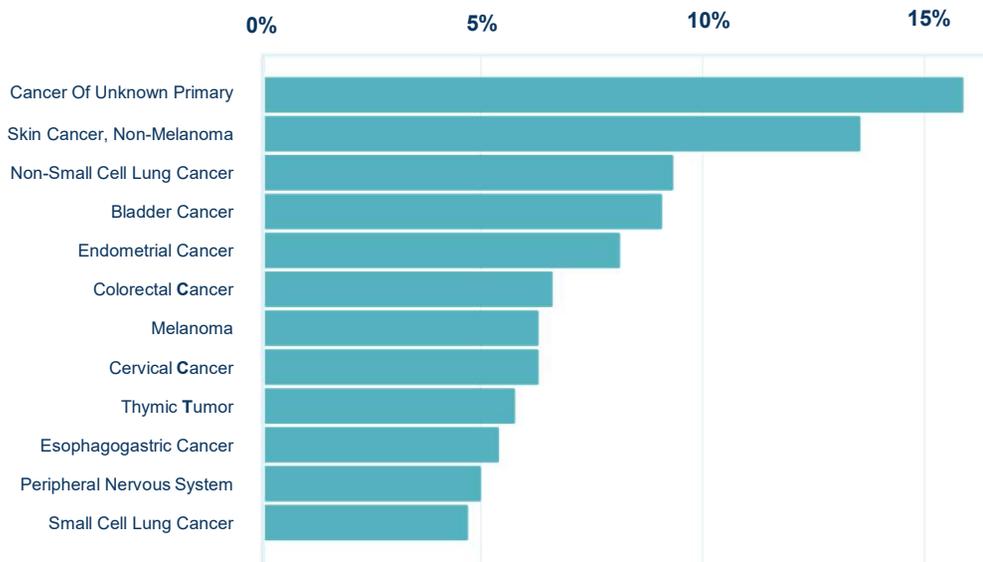


\* Per year incidence in U.S., EU5, Japan

# BRG1 MUTATED IN ~5% OF ALL TUMORS

Broad Addressable Patient Population

## BRG1 MUTATED ACROSS RANGE OF TUMORS



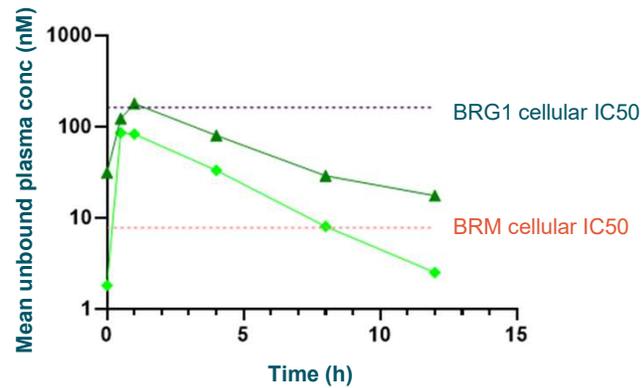
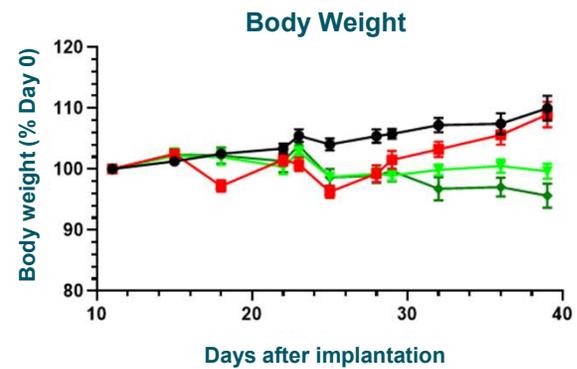
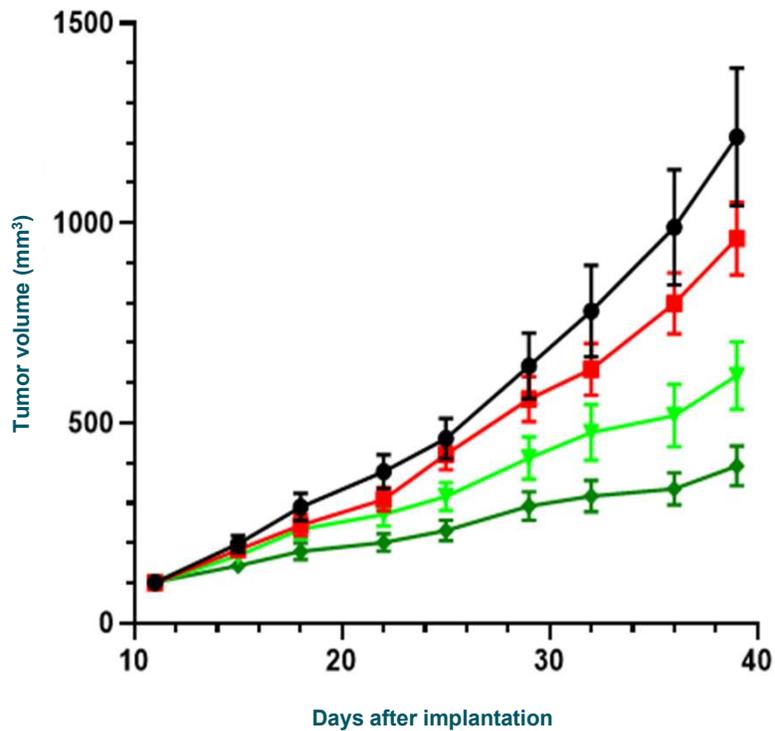
## BRG1 MUTATED IN UP TO 10% OF NSCLC TUMORS, MINIMAL OVERLAP WITH OTHER MUTATIONS



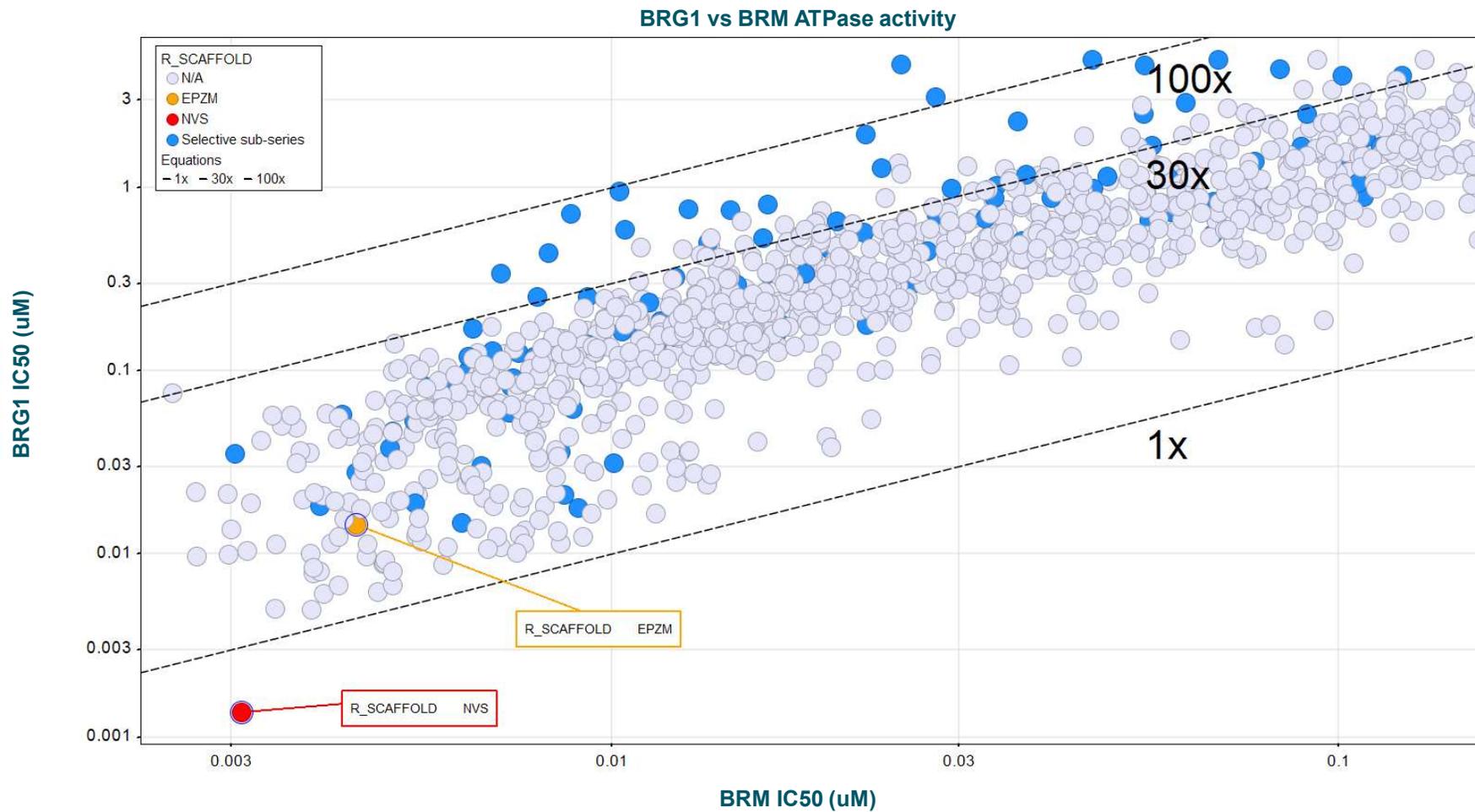
# BRM SELECTIVE INHIBITOR *IN VIVO* EFFICACY

Demonstrates PK / PD and *In Vivo* Efficacy in a BRG1 Mutant Lung CDX Model

## A549-BRG1 MUTANT NSCLC MODEL



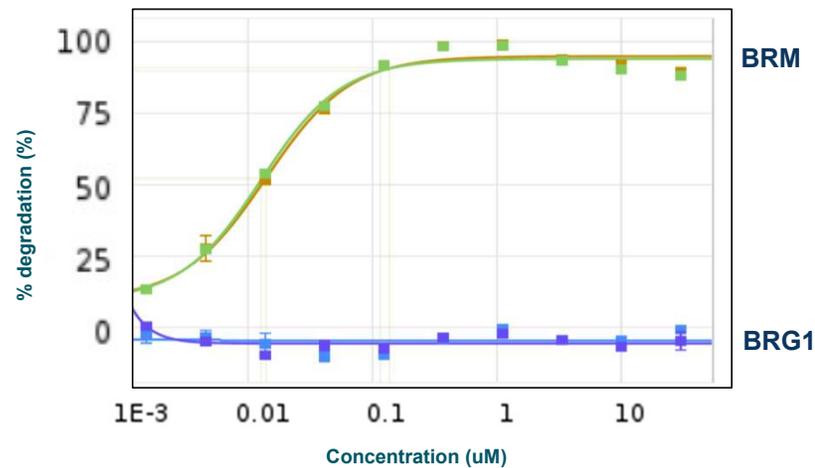
# ENZYMATIC SELECTIVITY APPROACHING 200X ACHIEVED



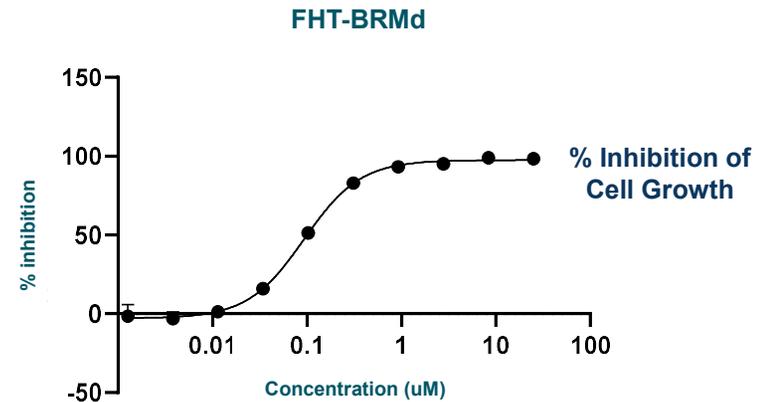
# ADVANCING BRM SELECTIVE DEGRADERS

Achieving Complete BRM Degradation

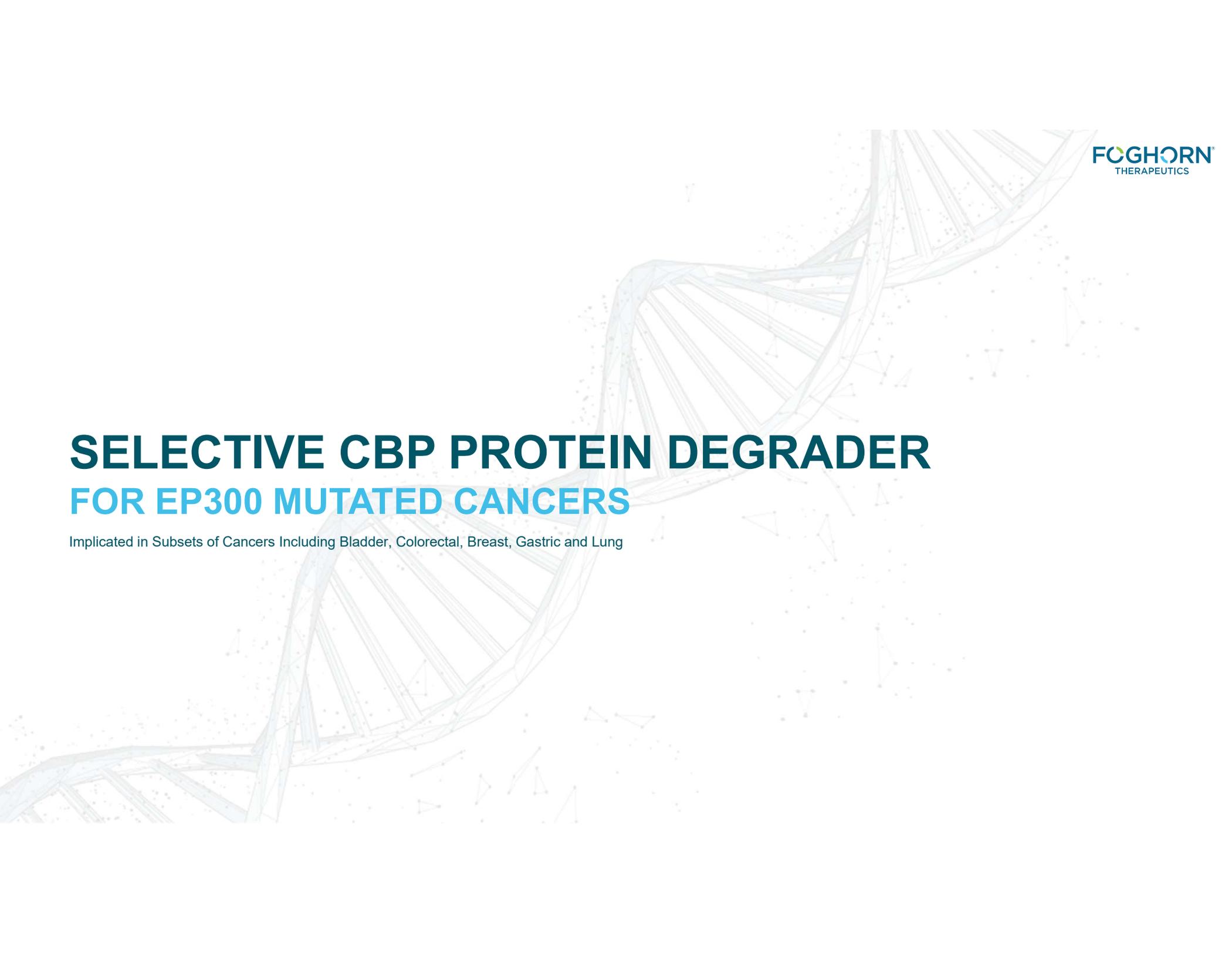
BRM / BRG1 HIBIT DATA



A549 TEN-DAY PROLIFERATION ASSAY



**DEGRADERS CAUSE TIME- AND DOSE-DEPENDENT BRM DEGRADATION, ANTIPROLIFERATIVE EFFECTS IN A549 BRG1 MUTANT NSCLC LUNG MODEL**



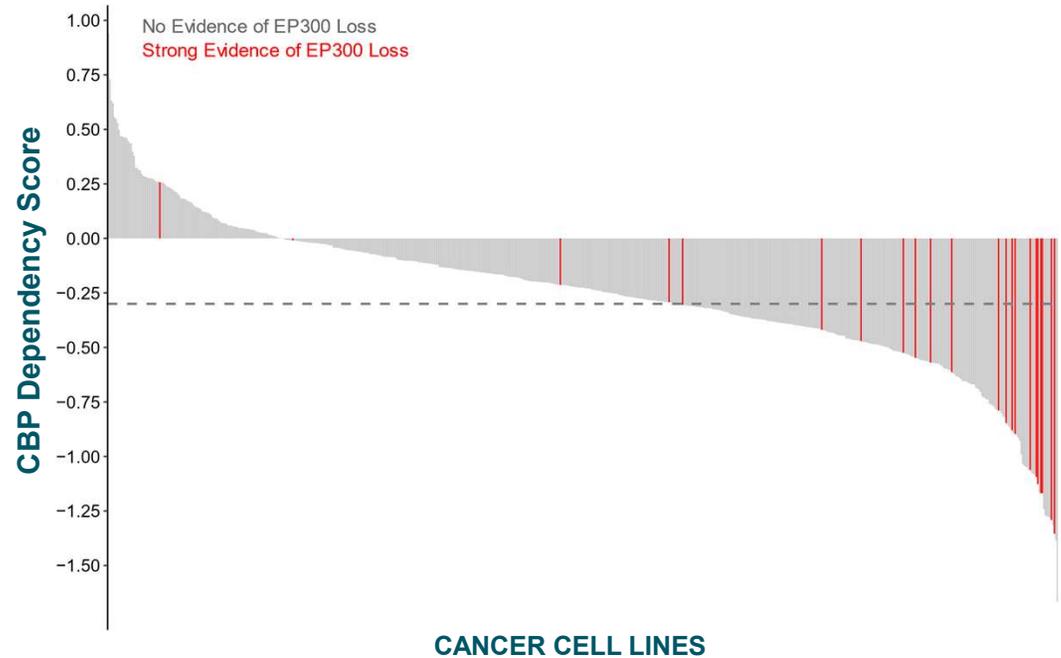
# **SELECTIVE CBP PROTEIN DEGRADER** **FOR EP300 MUTATED CANCERS**

Implicated in Subsets of Cancers Including Bladder, Colorectal, Breast, Gastric and Lung

# ADVANCING HIGHLY SELECTIVE CBP PROTEIN DEGRADER FOR EP300 MUTATED CANCERS

## Selective CBP Protein Degradation Overview

<b>Target / Approach</b>	<ul style="list-style-type: none"><li>• CREB binding protein (CBP)</li><li>• Targeted protein degrader</li></ul>
<b>Initial Indication</b>	<ul style="list-style-type: none"><li>• EP300 mutated cancers (e.g., subsets of prostate, bladder, colorectal, breast, gastric and lung cancers)</li></ul>
<b>Mutation / Aberration</b>	<ul style="list-style-type: none"><li>• EP300 mutated cancers</li></ul>
<b>Stage</b>	<ul style="list-style-type: none"><li>• Pre-clinical</li></ul>
<b>New Patients Impacted / Year*</b>	<ul style="list-style-type: none"><li>• Over 100,000</li></ul>

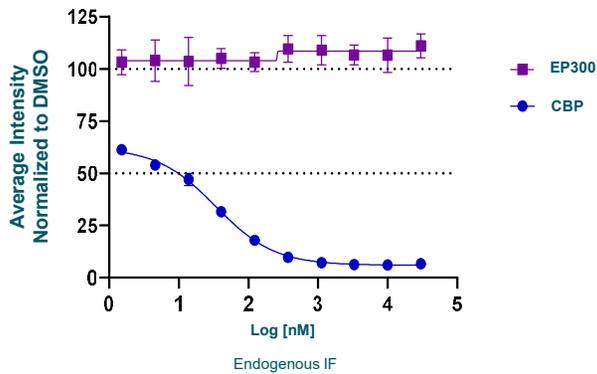


\* Per year incidence in U.S., EU5, Japan

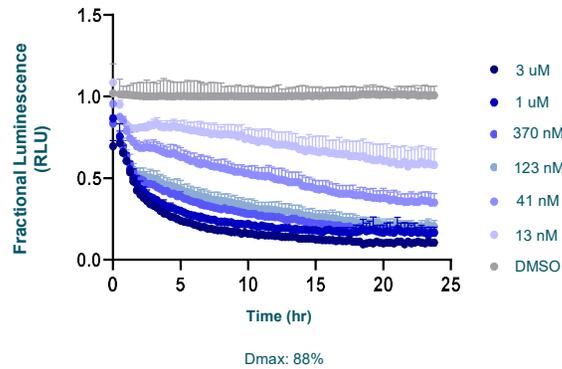
# ADVANCEMENT OF HIGHLY SELECTIVE CBP DEGRADERS

## SELECTIVE CBP DEGRADATION Osteosarcoma Cell Line

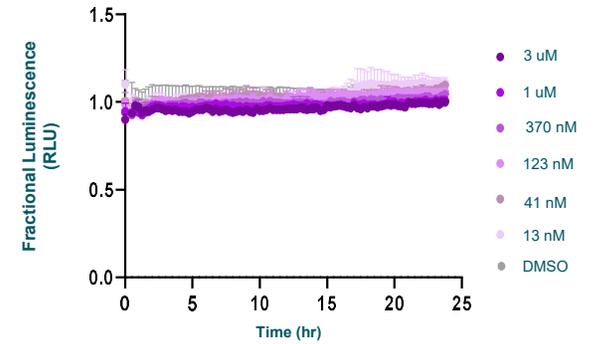
### Selective CBP Degradation U2OS



### HiBiT-CBP U2OS

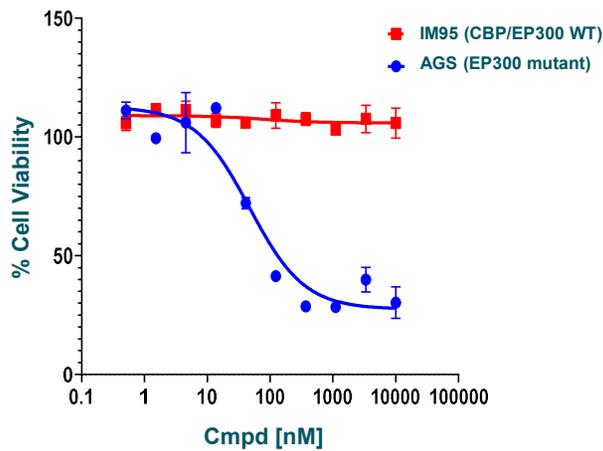


### HiBiT-EP300 U2OS

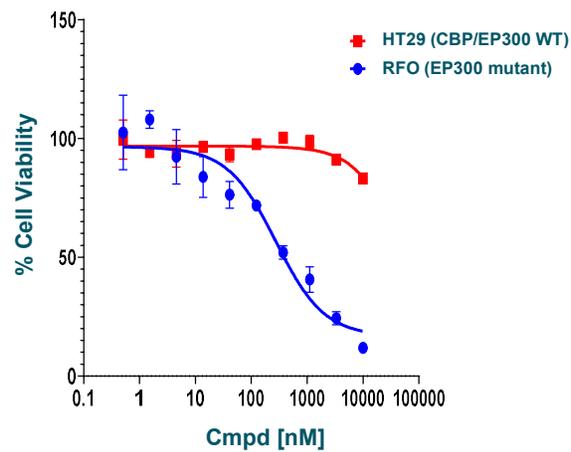


# HIGHLY SELECTIVE DEGRADER OF CBP DEMONSTRATES CBP-DEPENDENT CELL KILLING ACROSS MULTIPLE CANCERS

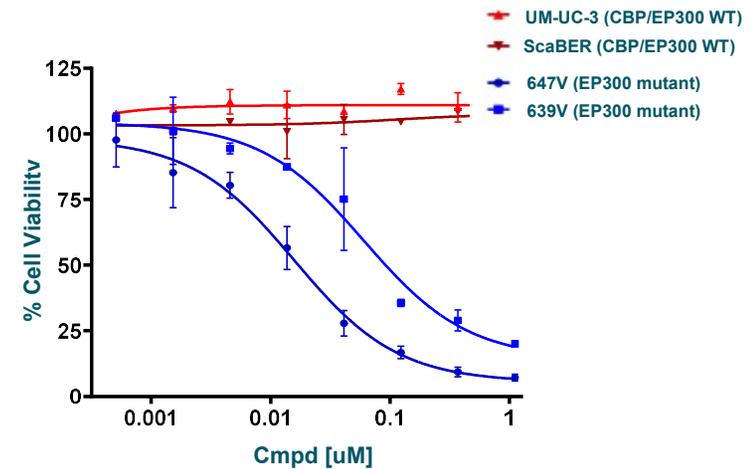
## Gastric Cancer



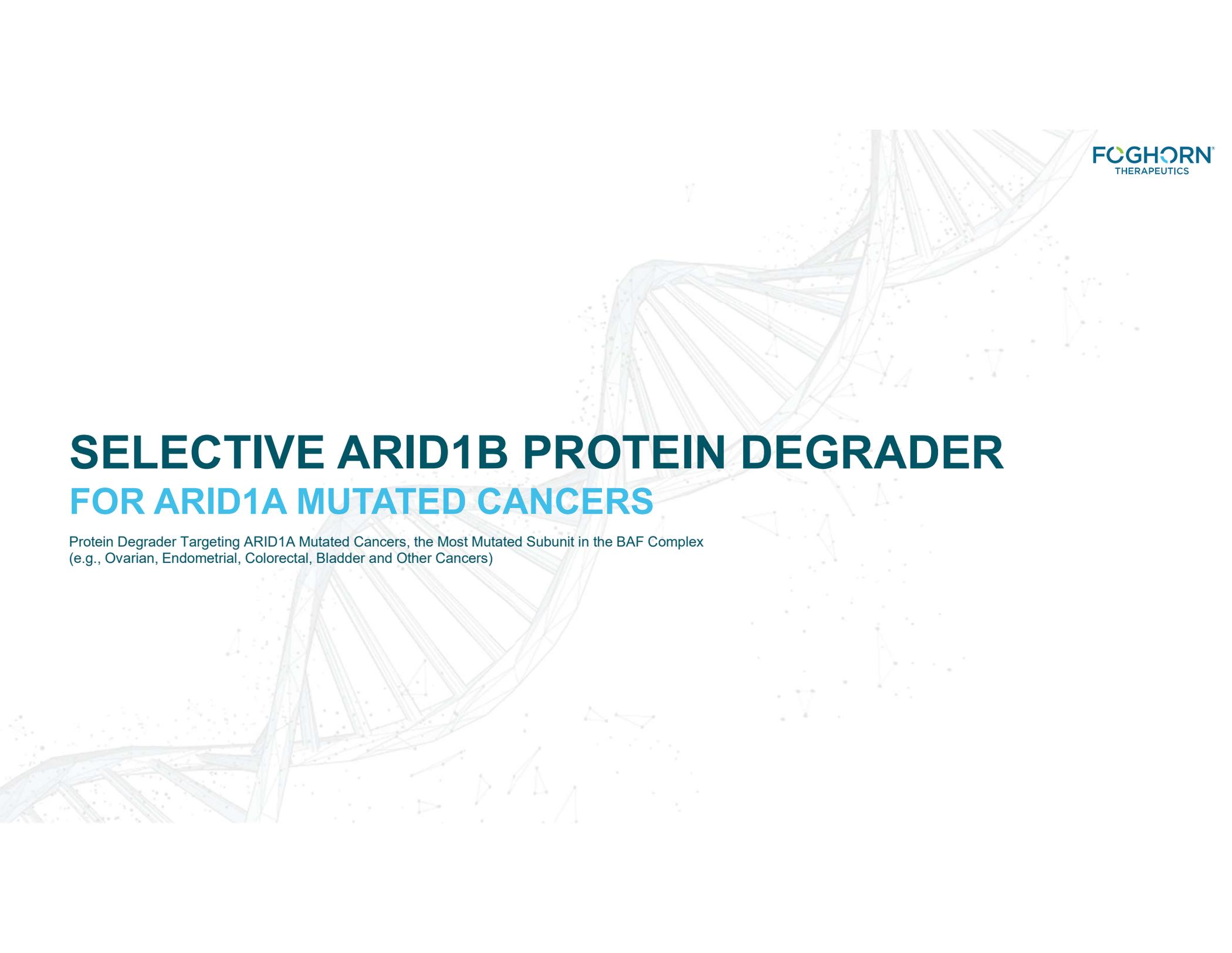
## Colorectal Cancer



## Bladder Cancer



CELL PROLIFERATION ASSAYS

A large, light blue, wireframe-style DNA double helix structure that curves across the background of the slide, with a network of smaller dots and lines extending from it.

# SELECTIVE ARID1B PROTEIN DEGRADER FOR ARID1A MUTATED CANCERS

Protein Degradator Targeting ARID1A Mutated Cancers, the Most Mutated Subunit in the BAF Complex  
(e.g., Ovarian, Endometrial, Colorectal, Bladder and Other Cancers)

# ARID1A: MOST MUTATED SUBUNIT IN BAF COMPLEX – CREATES DEPENDENCY ON ARID1B

## Selective ARID1B Protein Degradation Overview

**Target / Approach**

- ARID1B
- Targeted protein degrader

**Initial Indication**

- ARID1A mutated cancers

**Mutation / Aberration**

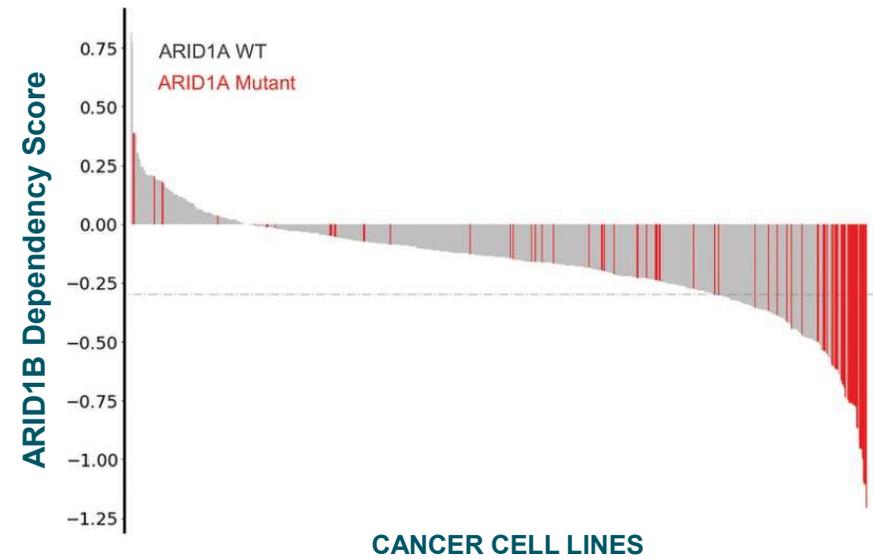
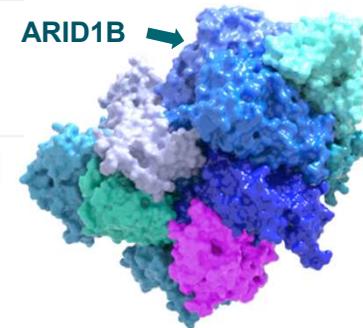
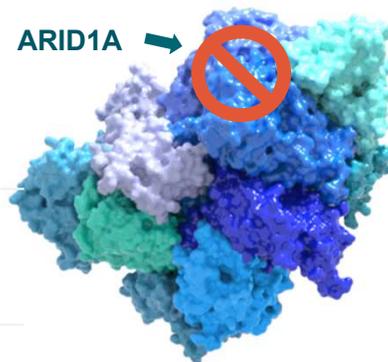
- ARID1A mutations (e.g., ovarian, endometrial, colorectal, bladder and other cancers)

**Stage**

- Pre-clinical

**New Patients Impacted / Year\***

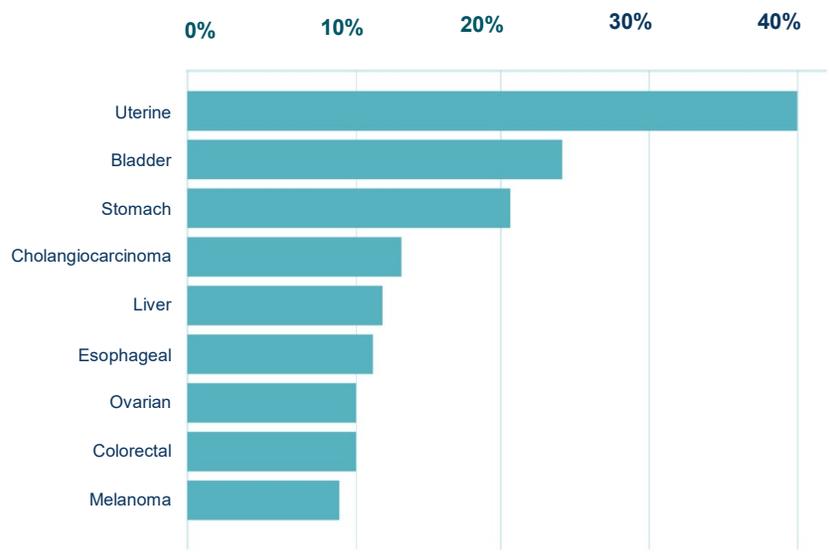
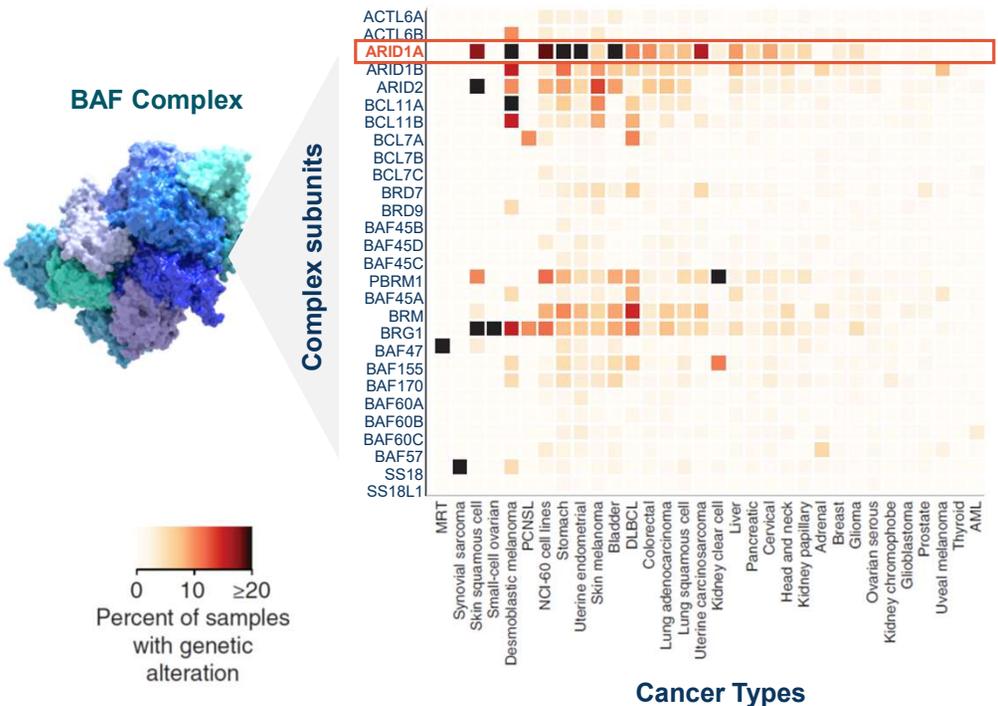
- > 175,000



\* Per year incidence in U.S., EU5, Japan

# ARID1A MUTATED CANCERS: SIGNIFICANT OPPORTUNITY

ARID1A Mutated Across Range of Tumors



~5% of all solid tumors harbor ARID1A mutations

# TARGETING ARID1A MUTATED CANCERS: ARID1B PROTEIN DEGRADER

Advantaged by Gene Traffic Control Platform and Protein Degradation Capabilities

## GENE TRAFFIC CONTROL PLATFORM

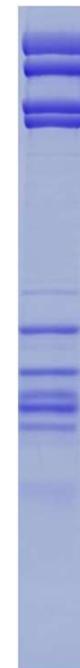
- Platform produces BAF complexes and subcomplexes containing either ARID1A or ARID1B at scale
- Enables proprietary screens against ARID1B

## PROTEIN DEGRADER CAPABILITIES

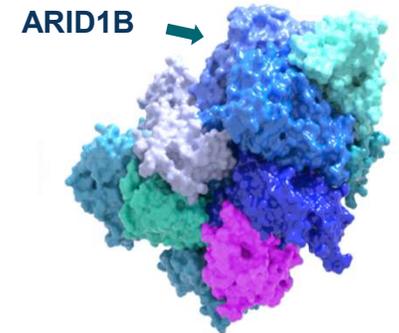
- Utilize protein degrader toolbox to create ARID1B hetero-bifunctional degraders

## PROGRAM STATUS

- Validated selective chemical binders of ARID1B
- In process of expanding binders into novel selective protein degraders
- Assessing outcomes of ARID1B degradation and impact on BAF complex formation



Highly purified ARID1B /  
BAF complex



# **TRANSCRIPTION FACTORS**

## **A NOVEL APPROACH**

# A NEW APPROACH TO DRUGGING TRANSCRIPTION FACTORS

Enabled by Proprietary Ability to Purify and Synthesize Chromatin Regulatory System Components

## TFS ARE COMPELLING DRUG TARGETS...

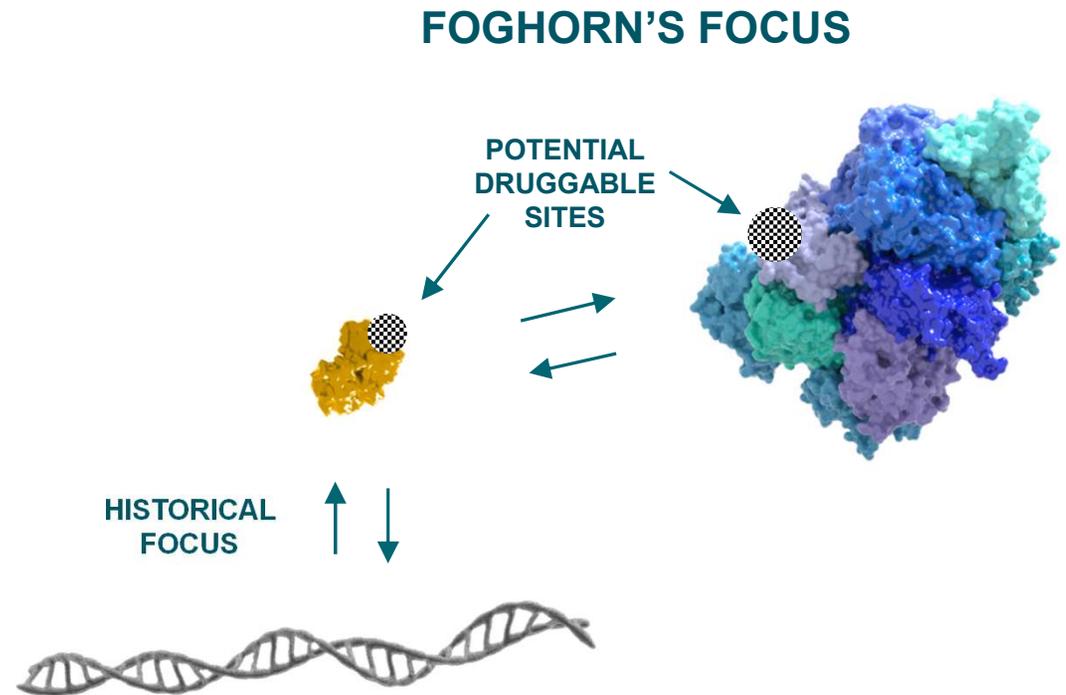
- Highly involved in gene expression
- Implicated in range of cancers and other diseases

## ...BUT HISTORICALLY DIFFICULT TO TARGET

- Featureless surface: no druggable binding pocket
- Tight interactions with DNA: undruggable affinities

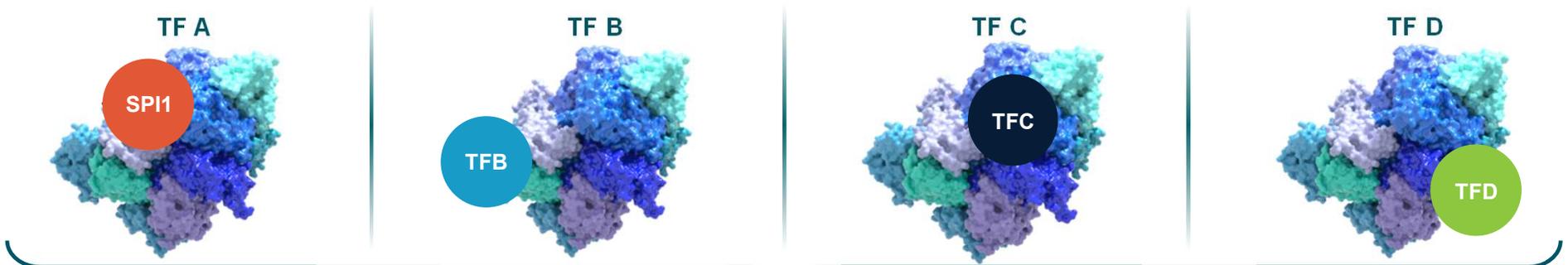
## FOGHORN HAS A NEW APPROACH FOCUSING ON INTERACTION WITH BAF

- Druggable binding pockets
- Druggable affinities

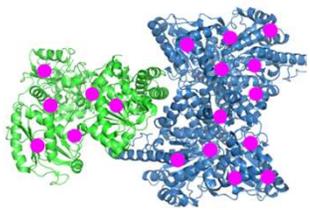


# TRANSCRIPTION FACTORS BIND TO BAF DIRECTLY WITH HIGH DEGREE OF SPECIFICITY

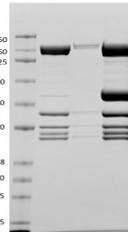
Unique Insights into Where and How Transcription Factors Bind



## MAPPING THE TF-BAF INTERACTION



MASS SPEC. FOOT-PRINTING

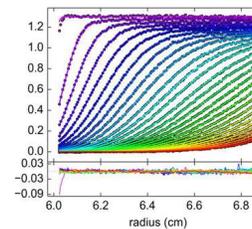


PULL-DOWN ASSAYS

Foghorn's collection of BAF sub-complexes and domains

## VALIDATING THE TF-BAF INTERACTION

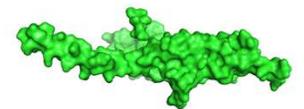
**BIOPHYSICAL**  
AUC / SPR / ITC



**BIOCHEMICAL**  
TR-FRET / FP



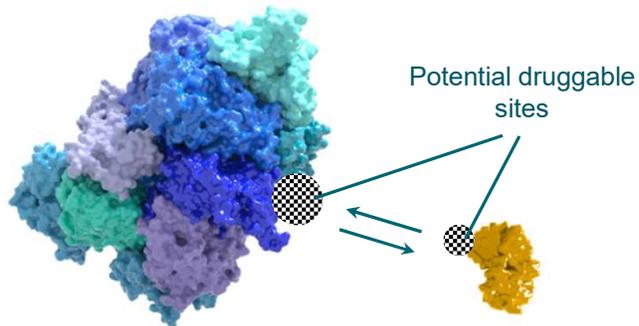
**STRUCTURAL**  
Crystal / NMR



# HIGHLY SCALABLE APPROACH TO ADDRESS SIGNIFICANT UNMET MEDICAL NEED DRIVES MERCK COLLABORATION

Potential to Drug > 100 TFs Associated with BAF

## TRANSCRIPTION FACTOR DISRUPTORS



- >100 TFs estimated associated with BAF
- Foghorn pursuing multiple TFs in parallel
- Approach highly scalable and potential broad application – other chromatin remodeling complexes and other diseases



- Merck collaboration to drug single specified transcription factor target
- \$15 million upfront; up to \$410 million in research, development, regulatory and sales-based milestones
- Up to low double-digit royalties on product sales

# BROAD PIPELINE ACROSS A RANGE OF TARGETS AND MODALITIES

Precision Oncology / Breadth and Depth / Over 15 Programs

Modality	Program	Discovery	Phase 1	Phase 2	Phase 3	Commercial Rights	Patient Population*
Enzyme Inhibitors	FHD-286 (BRG1/BRM)	AML & MDS				FOGHORN THERAPEUTICS	Over 27,000
	FHD-286 (BRG1/BRM)	Uveal Melanoma				FOGHORN THERAPEUTICS	Over 5,000
	Selective BRM	BRG1 Mutated Cancers, e.g., NSCLC & Bladder				LOXO FOGHORN THERAPEUTICS	Over 100,000
Protein Degraders	FHD-609 (BRD9)	Synovial Sarcoma & SMARCB1-Loss Tumors				FOGHORN THERAPEUTICS	Over 2,800
	Selective BRM	BRG1 Mutated Cancers, e.g., NSCLC & Bladder				LOXO FOGHORN THERAPEUTICS	Over 100,000
	Selective ARID1B	ARID1A Mutated Cancers, e.g., Ovarian, Endometrial & Colorectal				FOGHORN THERAPEUTICS	Over 175,000
	Selective CBP	EP300 Mutated Cancers, e.g., Prostate, Bladder, Colorectal, Breast				FOGHORN THERAPEUTICS	Over 100,000
Transcription Factor Disruptors	Undisclosed	Undisclosed				FOGHORN THERAPEUTICS	
	Undisclosed	Undisclosed				MERCK	
Partnered Program	Undisclosed	Undisclosed				LOXO FOGHORN THERAPEUTICS	
	3 Discovery Programs	3 Undisclosed Programs				LOXO FOGHORN THERAPEUTICS	

\* Incidence in the U.S., EU5, Japan

# FIRST-IN-CLASS PRECISION MEDICINES TARGETING MAJOR UNMET NEEDS IN CANCER



## LEADER IN NEW AREA OF CANCER BIOLOGY

Foghorn is a **leader in targeting chromatin biology**, which has unique potential to address underlying dependencies of many genetically defined cancers

Broad pipeline of **over 15 programs** across a range of targets and modalities



## LARGE MARKET POTENTIAL

Chromatin biology is implicated in up to **50% of tumors**, potentially impacting **~2.5 million patients**

Foghorn's current pipeline potentially addresses **more than 500,000** of these patients



## WELL-FUNDED

**\$374.5 million** in cash and equivalents  
*(as of 9/30/2022)*

Provides **runway into H2'2025**



## SIGNIFICANT VALUE DRIVERS IN 2023

Initial clinical data in uveal melanoma with **FHD-286** expected **H1'23**

Initial clinical data in synovial sarcoma with **FHD-609** expected **mid-2023**

AML/MDS study with FHD-286 on full clinical hold, development **clarity anticipated in H1'23**



## COLLABORATIONS WITH MAJOR ONCOLOGY PLAYERS

Strategic collaboration with Loxo Oncology at Lilly; **\$380 million upfront**; 50/50 U.S. economic split on two lead programs

Merck collaboration to drug single specified transcription factor target; **\$15 million upfront** and up to **\$410 million** in milestones

# APPENDIX



# **STRATEGIC PARTNERSHIP**

## **LOXO ONCOLOGY AT LILLY**

# STRATEGIC COLLABORATION WITH LOXO ONCOLOGY AT LILLY

Foghorn to Lead Discovery and Research Activities



## \$380 MILLION UPFRONT

\$300 million cash payment

\$80 million investment in Foghorn common stock at a price of \$20 per share



## 50/50 U.S. ECONOMICS ON TWO PROGRAMS

50/50 U.S. economic split on BRM-Selective and another undisclosed program

Tiered ex-U.S. royalties starting in the low double-digit range and escalating into the twenties based on revenue levels



## THREE UNDISCLOSED DISCOVERY PROGRAMS

Option to participate in a percentage of the U.S. economics

Tiered ex-U.S. royalties from the mid-single digit to low-double digit range

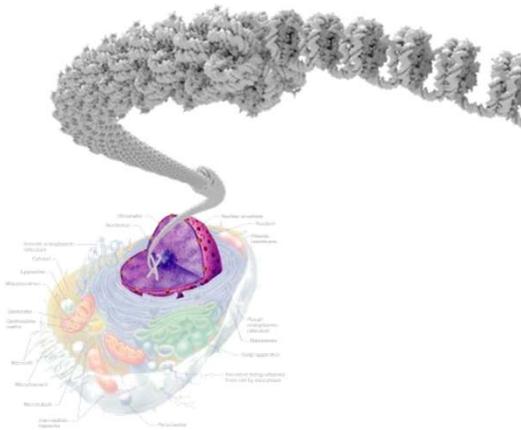
\$1.3 billion in potential milestones

# **THE CHROMATIN REGULATORY SYSTEM**

## **ORCHESTRATES GENE EXPRESSION**

# THE CHROMATIN REGULATORY SYSTEM ORCHESTRATES GENE EXPRESSION

Two Major Components Work in Concert: Chromatin Remodeling Complexes and Transcription Factors

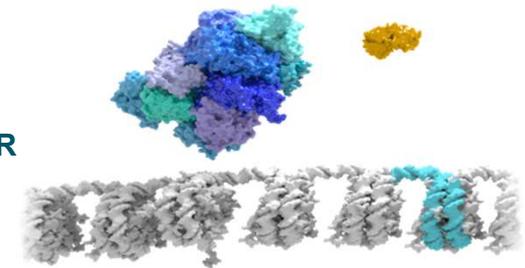


## CHROMATIN

Chromatin – compacted form of DNA inside the nucleus of the cell

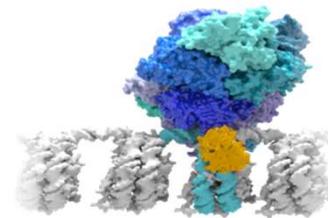
## 1 | CHROMATIN REMODELING COMPLEX AND TRANSCRIPTION FACTOR

Work together to orchestrate gene expression



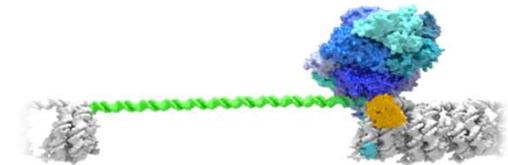
## 2 | RIGHT GENES

TFs guide chromatin remodeling complexes to the right locations

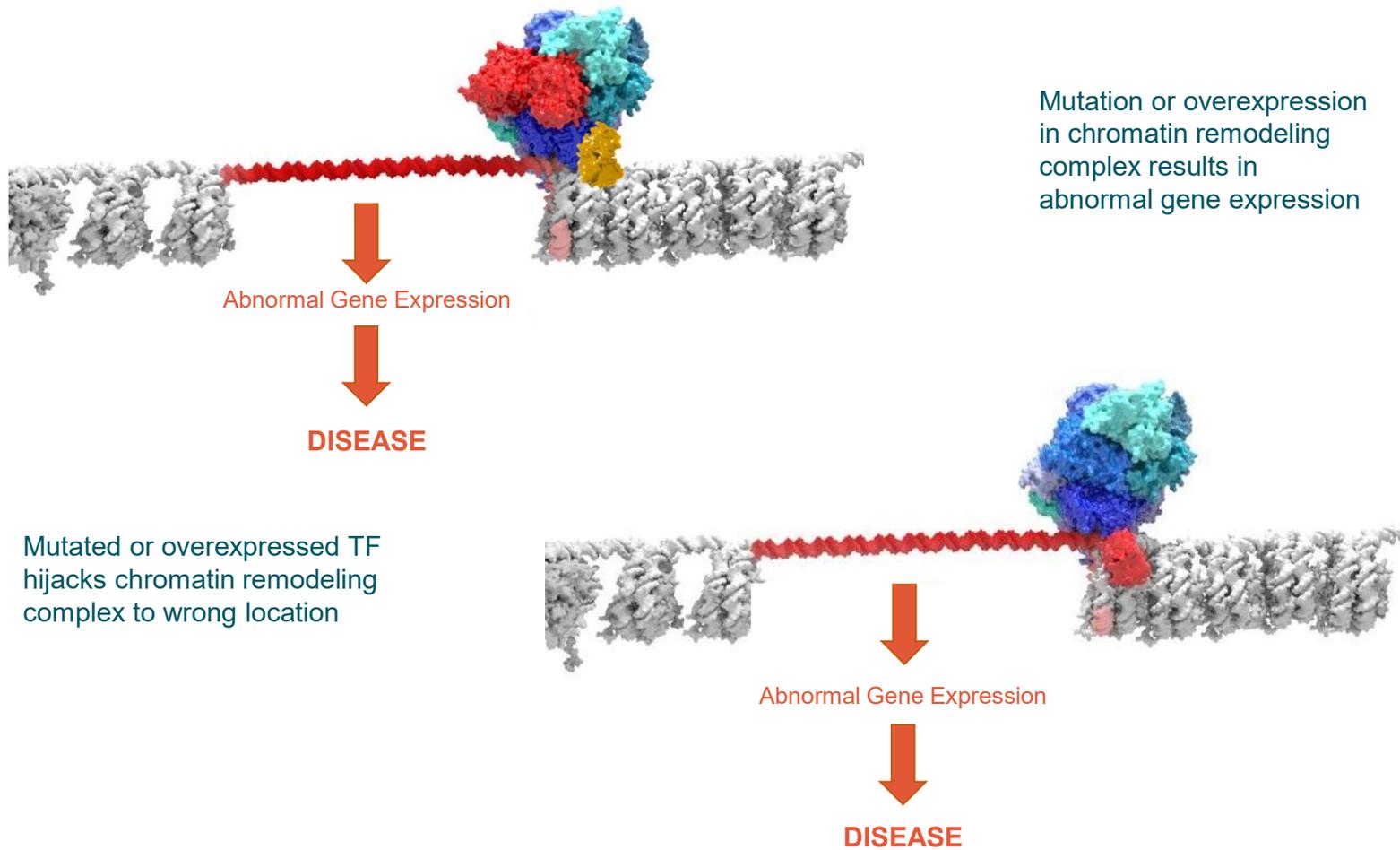


## 3 | NORMAL GENE EXPRESSION

Once chromatin is unpacked, gene expression can occur



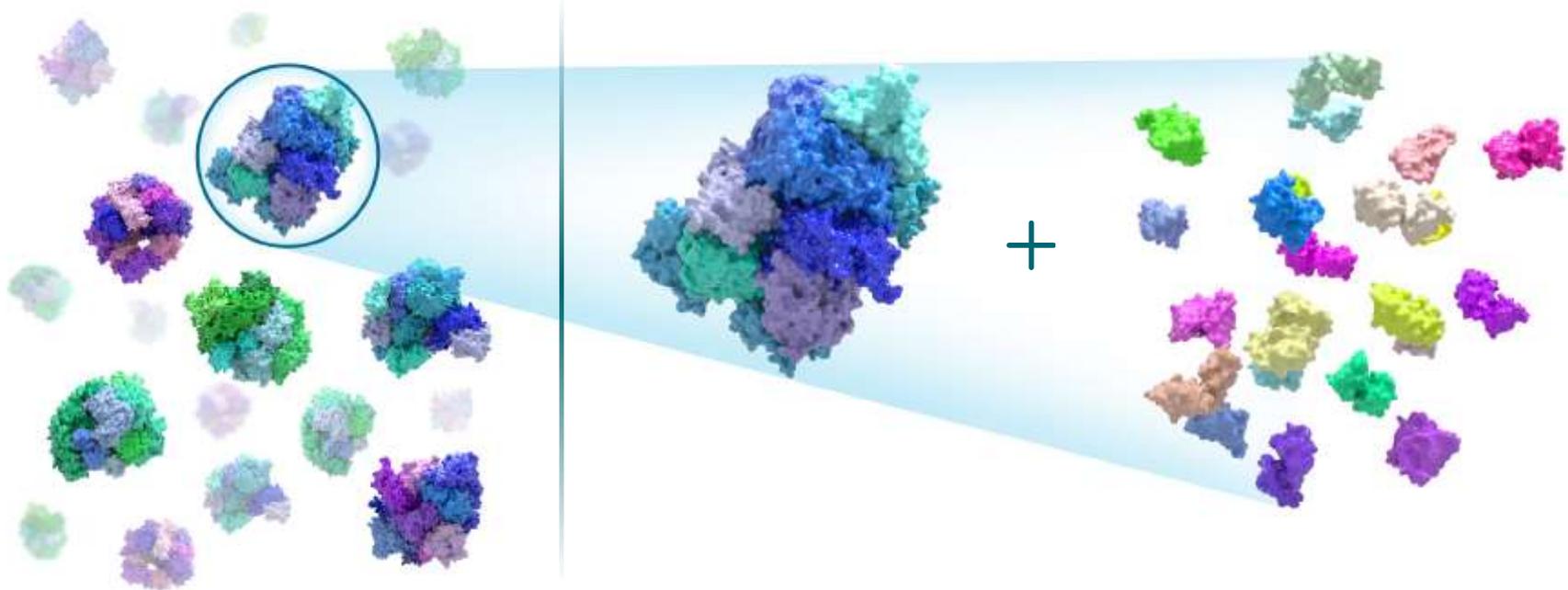
# BREAKDOWNS IN THE CHROMATIN REGULATORY SYSTEM CAN LEAD TO DISEASE



# CHROMATIN REGULATORY SYSTEM

Abundance of Targets within the BAF Complex

## BAF COMPLEX AND ASSOCIATED TRANSCRIPTION FACTORS



28 Chromatin Remodeling  
Complexes and >1,000 TFs

BAF Complex Subunits Mutated  
and Dysregulated in Cancer

Estimate >100  
Transcription Factors  
Associated with Just  
the BAF Complex

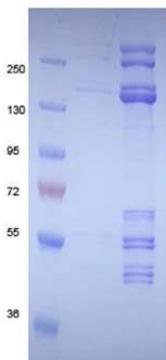
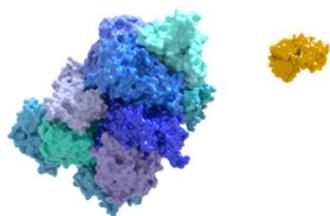
# PLATFORM & DRUGGING CAPABILITIES

• FcγR2b is a Potent Selective Inhibitor of  
FcγR1- and FcγR3-mediated

# PLATFORM IS POWERED BY ABILITY TO PRODUCE COMPONENTS AT SCALE

Drives Drug Discovery Pipeline with Cutting Edge Technology

## PRODUCTION OF CHROMATIN REGULATORY SYSTEM COMPONENTS

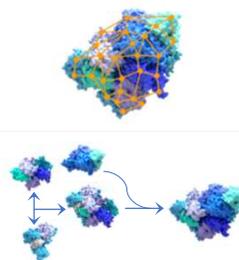


### FEATURES

### BENEFITS

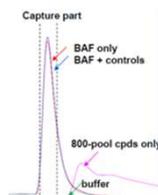
Surface Mapping

Characterize TF / BAF Binding Sites



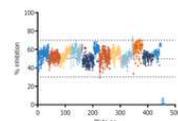
Assembly

Synthesize subcomplexes to enable drug discovery



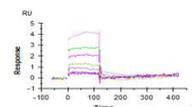
Affinity Screening & Validation

ASMS on full complex to yield novel degraders



HTS

Multiple screening options with full complex



Biophysics/SPR

Validation of novel small molecule binders

# PROTEIN DEGRADER PLATFORM

## CURRENT APPROACH

- A leader in developing heterobifunctional degraders for clinical evaluation in oncology
- Employing PROTAC and non-CRBN based molecular glue degradation approaches

## DEGRADER CHEMICAL TOOLBOX

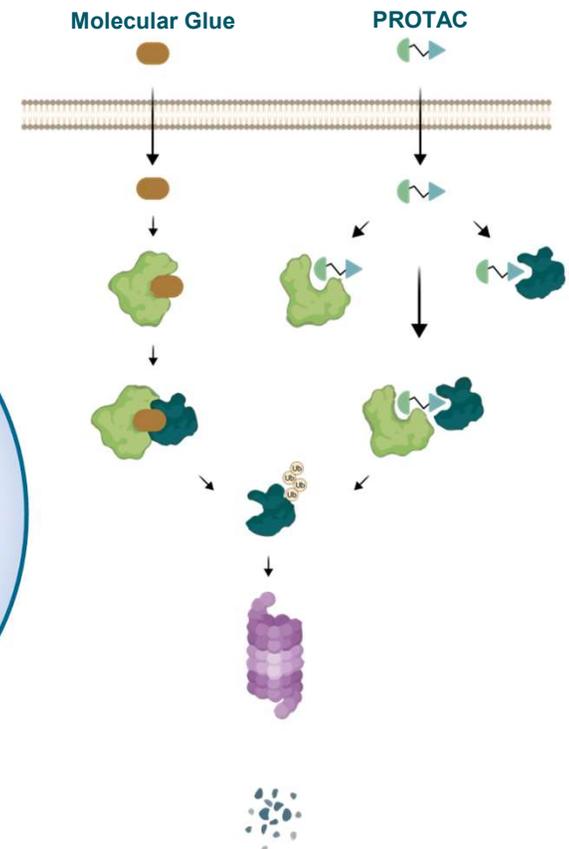
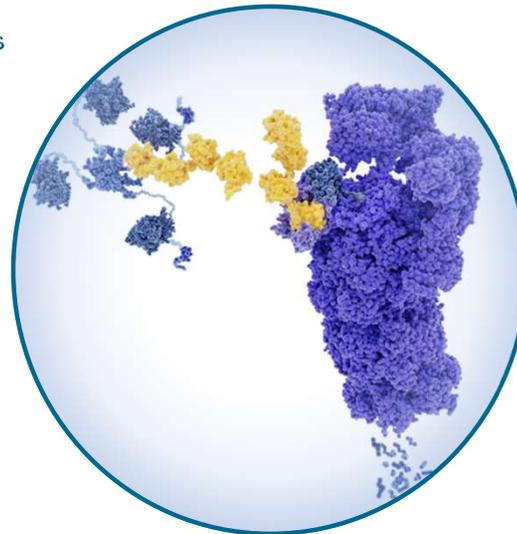
- Proprietary library of drug-like linkers, E3 ligase binders and potential glues
- Chemistry to rapidly identify and optimize degraders

## ADVANCED MECHANISTIC CHARACTERIZATION

- Native target turnover understanding
- Cellular degradation kinetics and rates
- Structural, biochemical and cellular ternary complex characterization
- Global proteomics and ubiquitination studies
- Computational modeling of degraders
- Degradation efficacy across multiple cell types

## OPTIMIZATION OF DEGRADER DRUG PROPERTIES

- Guidelines for both of oral and IV-administered degraders
- PK / PD, efficacy and safety modeling to optimize dosing and scheduling



# **Leadership Team, Board & Advisors**

**EXPERTISE ACROSS DRUG DISCOVERY, CLINICAL  
DEVELOPMENT AND COMMERCIALIZATION**

# PROVEN LEADERSHIP TEAM



**ADRIAN GOTTSCHALK**  
President & CEO



**SAM AGRESTA, M.D.,  
M.P.H & TM**  
Chief Medical Officer



**STEVE BELLON, PH.D.**  
Chief Scientific Officer



**FANNY CAVALIÉ**  
Chief Strategy and Business  
Operations Officer



**CARLOS COSTA**  
Chief People Officer



**MICHAEL LACASCIA**  
Chief Legal Officer



**ALLAN REINE, M.D.**  
Chief Financial Officer



**JACQUELINE CINICOLA**  
VP, Regulatory Affairs



**DANETTE L. DANIELS,  
PH.D.**  
VP, Protein Degradation Platform



**ANDREW GERMAIN,  
PH.D.**  
VP, Legal



**CHONG-HUI GU, PH.D.**  
VP, CMC and QA



**KARIN HELLSVIK**  
VP, Corporate Affairs



**MURPHY HENTEMANN,  
PH.D.**  
VP, Program Leadership



**SCOTT INNIS**  
VP, Program Leadership



**NICOLA MAJCHRZAK**  
VP, Clinical Development  
Operations



**MARINA NELEN, PH.D.**  
VP, Drug Discovery



**SAURABH SEWAK**  
VP, Corporate Development



**BEN STRAIN**  
VP, Investor Relations &  
Corporate Communications



**KEVIN WILSON**  
VP, Chemistry

# INDUSTRY-LEADING BOARD OF DIRECTORS AND ADVISORS

## BOARD OF DIRECTORS

---

**DOUG COLE, M.D.**

*Flagship Pioneering – Board Chair; Founder*

**SCOTT BILLER, PH.D.**

*Former CSO and Strategic Advisor, Agios*

**SIMBA GILL, PH.D.**

*Evelo Biosciences, Partner at Flagship Pioneering*

**ADRIAN GOTTSCHALK**

*Foghorn President & CEO*

**ADAM KOPPEL, M.D., PH.D.**

*Bain Capital Life Sciences*

**THOMAS J. LYNCH, JR., M.D.**

*Fred Hutchinson Cancer Center*

**MICHAEL MENDELSON, M.D.**

*Cardurion Pharmaceuticals*

**B. LYNNE PARSHALL, ESQ.**

*Senior Strategic Advisor, Ionis Pharmaceuticals*

**IAN SMITH**

*Exec. Chair of Solid Bio., Former COO of Vertex*

## SCIENTIFIC & OTHER ADVISORS

---

**CHARLES SAWYERS, M.D.**

*MSKCC, HHMI – SAB Chair*

**CRAIG PETERSON, PH.D.**

*Professor, UMass Medical School*

**GERALD CRABTREE, M.D.**

*Stanford, HHMI; Founder*

**DAVID SCHENKEIN, M.D.**

*General Partner, GV*

**TONY KOUZARIDES, PH.D.**

*Gurdon Institute – University of Cambridge*

**CIGALL KADOCH, PH.D.**

*Dana-Farber, Broad, HMS, HHMI; Founder*

