Targeting the Chromatin Regulatory System

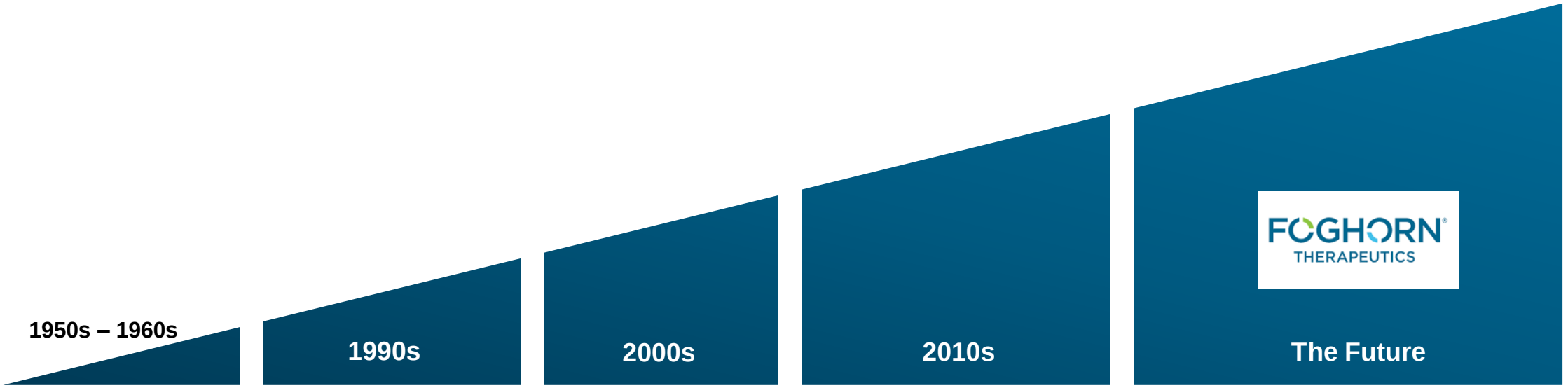
Broadening the Impact of Precision Medicines for Oncology and Other Diseases

June 2021

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 “may,” “will,” “should,” “expect,” “plan,” “anticipate,” “could,” “intend,” “target,” “project,” “contemplate,” “believe,” “estimate,” “predict,” “potential” or “continue” 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 initiation, timing, progress and results of our research and development programs and preclinical and clinical trials, our ability to advance product candidates that we may develop and 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 in 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 our initial public offering, 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.

The Chromatin Regulatory System: The Next Wave of Cancer Therapies



Cancer is one of the leading causes of death worldwide

Dysregulation of the Chromatin Regulatory System Has Been Implicated in up to 50% of All Cancers

Significant Market Opportunity

50%

of All Cancers

Based on exome sequencing, the chromatin regulatory system is implicated in ~50% of all cancers

2.5M

People

Patients impacted by these cancers

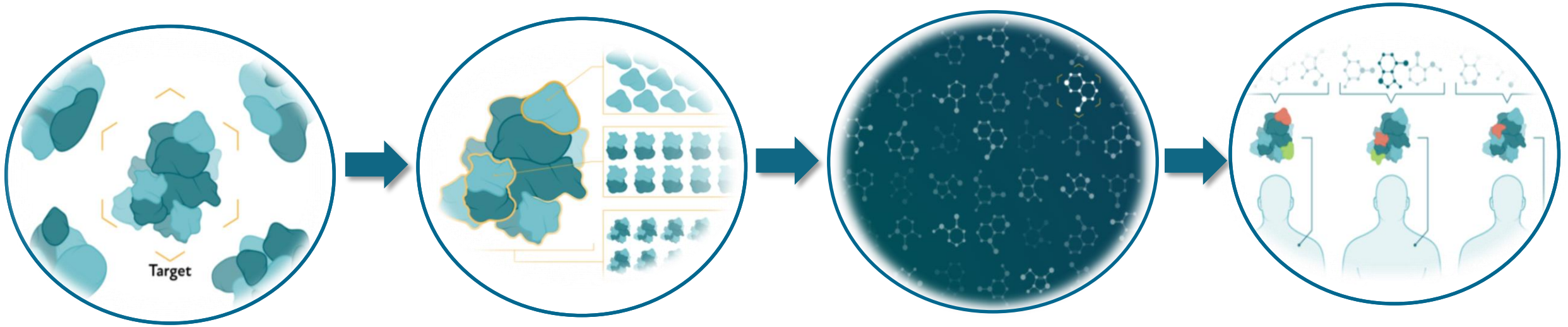
$400+

billion

2030 global oncology market opportunity

Our Gene Traffic Control Platform Makes It Possible to Understand and Drug Genetic Dependencies within the Chromatin Regulatory System

Integrated, Scalable, Efficient – Repeatable Paradigm



Target Identification & Validation

Determine dependencies (e.g., synthetic lethal)

Production of Chromatin Regulatory System Components at Scale & Proprietary Assays

Discovery and Optimization of Chemical Matter

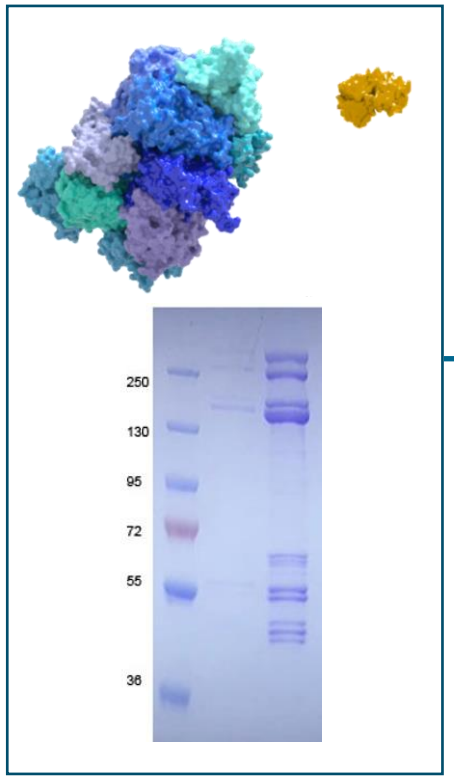
Targeted Protein Degraders
Enzymatic Inhibitors
Transcription Factor Disruptors

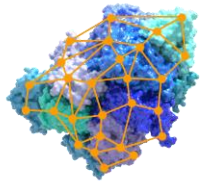
Translation to Clinic and Identification of Biomarkers

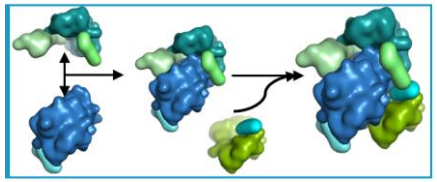
Platform is Powered by Ability to Produce Components at Scale

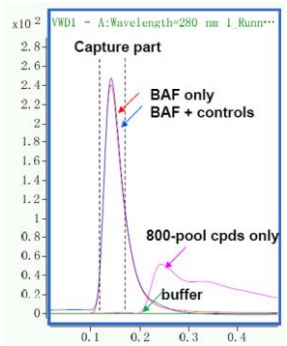
Drives Drug Discovery Pipeline with Cutting Edge Technology

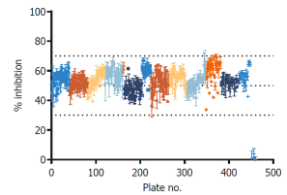
Production of Chromatin Regulatory System Components

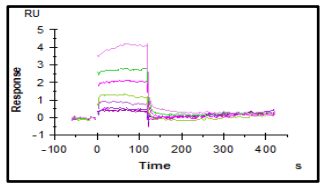












Features	Benefits
Surface Mapping	Characterize TF/BAF Binding Sites
Assembly	Synthesize subcomplexes to enable drug discovery
Affinity Screening and Validation	ASMS on full complex to yield novel degraders
HTS	Multiple screening options with full complex
Biophysics/ SPR	Validation of novel small molecule binders

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First Two Programs in the Clinic, Broad Pipeline Advancing

Precision Oncology / Breadth and Depth

Program / Target	Modality	Discovery	IND-enabling	Phase 1	Phase 2	Phase 3	Global Rights
FHD-286 (BRG1 / BRM)	Enzyme inhibitor	AML		Early Clinical Data (Q4 2021)			FOGHORN THERAPEUTICS
		Uveal melanoma		Early Clinical Data (Q4 2021)			FOGHORN THERAPEUTICS
FHD-609 (BRD9)	Protein degrader	Synovial sarcoma		Early Clinical Data (H1 2022)			FOGHORN THERAPEUTICS
Selective BRM	I) Enzyme inhibitor	BRG1 mutated cancers	IND 2022				FOGHORN THERAPEUTICS
	II) Protein degrader	BRG1 mutated cancers					
Selective ARID1B	Protein degrader	ARID1A mutated cancers					FOGHORN THERAPEUTICS
Synthetic Lethal Targets (multiple)	I) Enzyme inhibitors						FOGHORN THERAPEUTICS
	II) Protein degraders						
Transcription Factors (multiple)	Transcription factor disruptors						FOGHORN THERAPEUTICS
Partnered program (undisclosed)	Transcription factor disruptor						MERCK

Gene Traffic Control® Platform

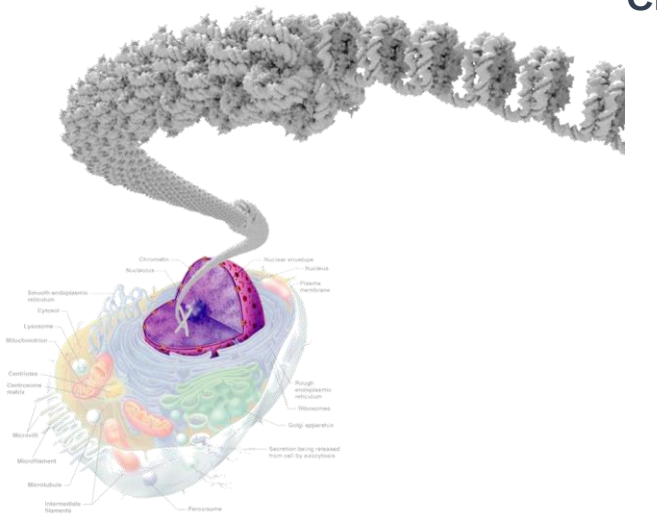
The Chromatin Regulatory System

Orchestrates Gene Expression

The Chromatin Regulatory System Orchestrates Gene Expression

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

Chromatin

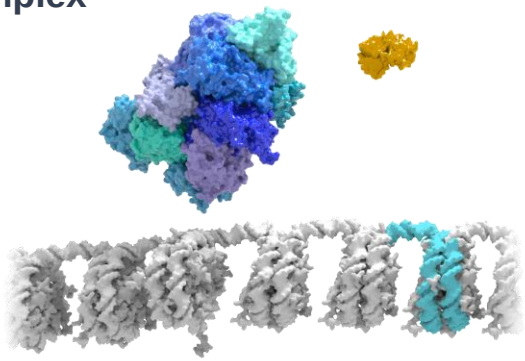


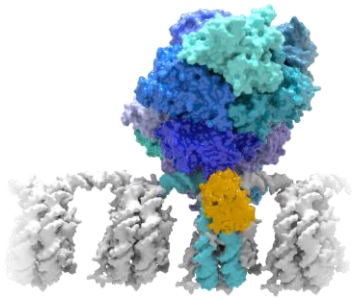
Chromatin – compacted form of DNA inside the nucleus of the cell

1 **Work together to orchestrate gene expression**

Chromatin remodeling complex

Transcription Factor

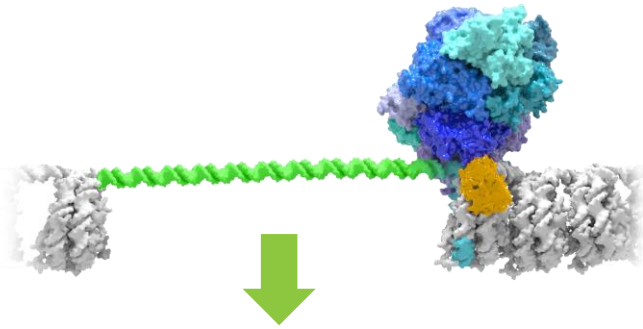




Right genes

2 **TF's guide chromatin remodeling complexes to the right locations**

3 **Once chromatin unpacked, gene expression can occur**



Normal gene expression

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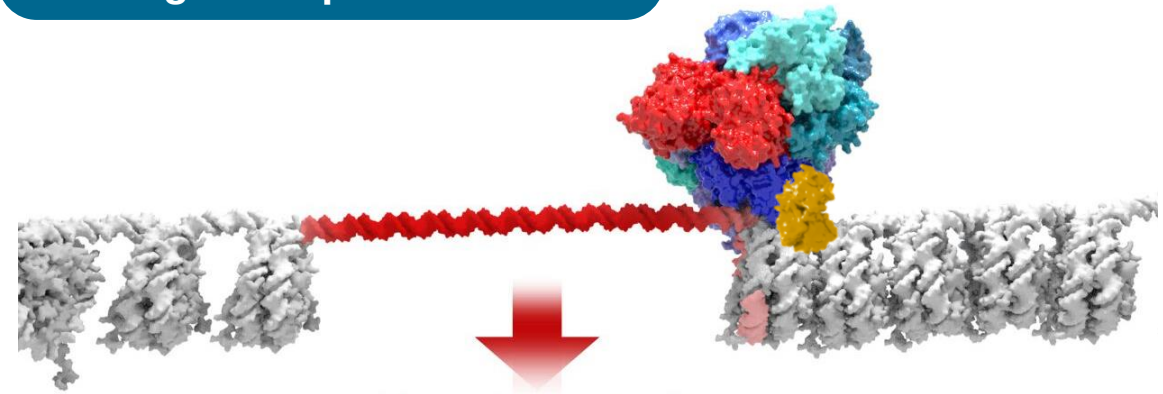
Breakdowns in the Chromatin Regulatory System Lead to Disease

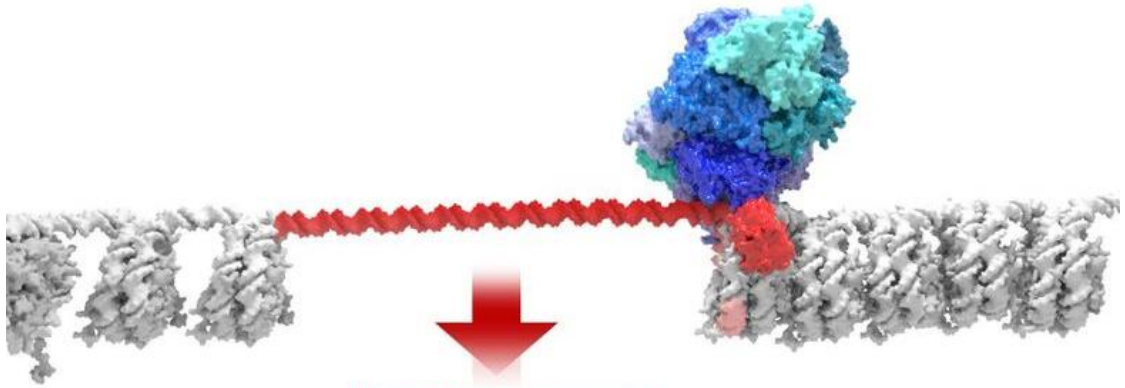
Mutations or overexpression in chromatin remodeling complexes result in abnormal gene expression



Abnormal gene expression

DISEASE

Mutated or overexpressed TF hijacks chromatin remodeling complex to wrong location



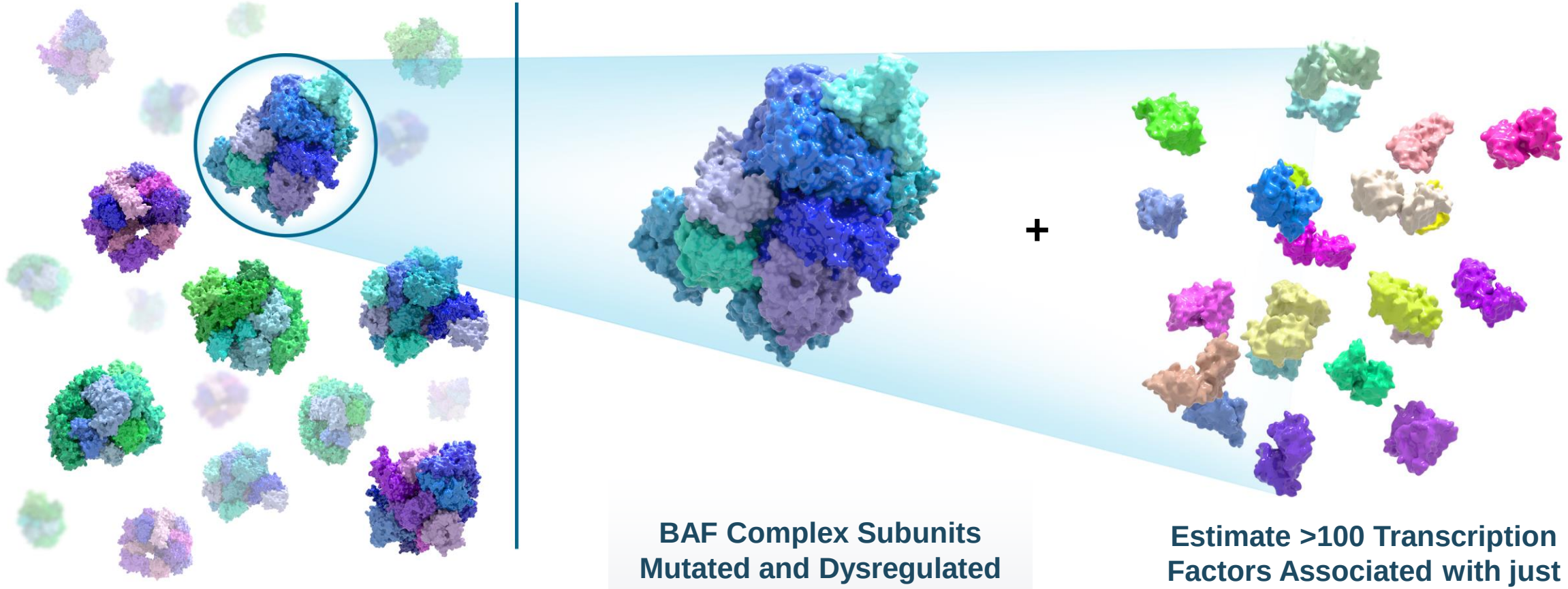
Abnormal gene expression

DISEASE

Chromatin Regulatory System – Abundance of Targets

28 Chromatin Remodeling Complexes and >1,000 TFs

BAF Complex and Associated Transcription Factors



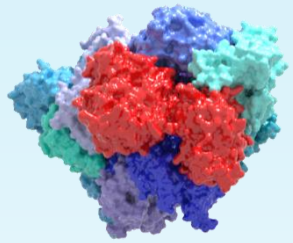
BAF Complex Subunits Mutated and Dysregulated in Cancer

Estimate >100 Transcription Factors Associated with just the BAF Complex

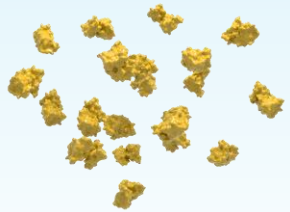
Mutations Lead to Disease Specific Genetic Dependencies on the Chromatin Regulatory System

Novel Targets / Dependencies

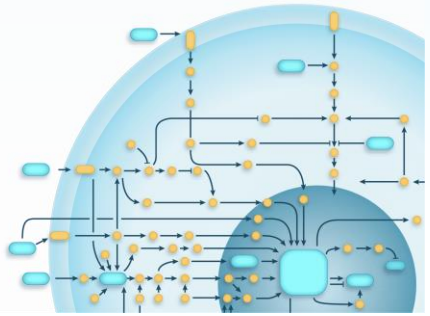
Chromatin Remodeling Complexes Mutations / Overexpression



Transcription Factor Mutations / Overexpression

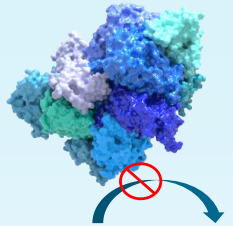


Mutations that Impinge on the Chromatin Regulatory System

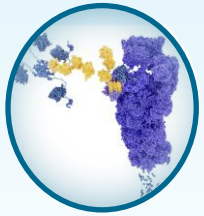


Tailored Drugging Approaches

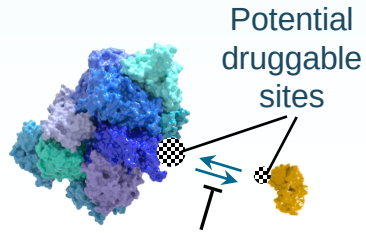
Enzymatic Inhibitors:
Highly selective and allosteric small molecule inhibitors



Targeted Protein Degradation:
Bi-functional protein degraders for targets with no enzymatic activity



Transcription Factor Disruptors:
Disrupt interactions between chromatin remodeling complexes and transcription factors



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FHD-286: Clinical Entry Point - AML and Uveal Melanoma

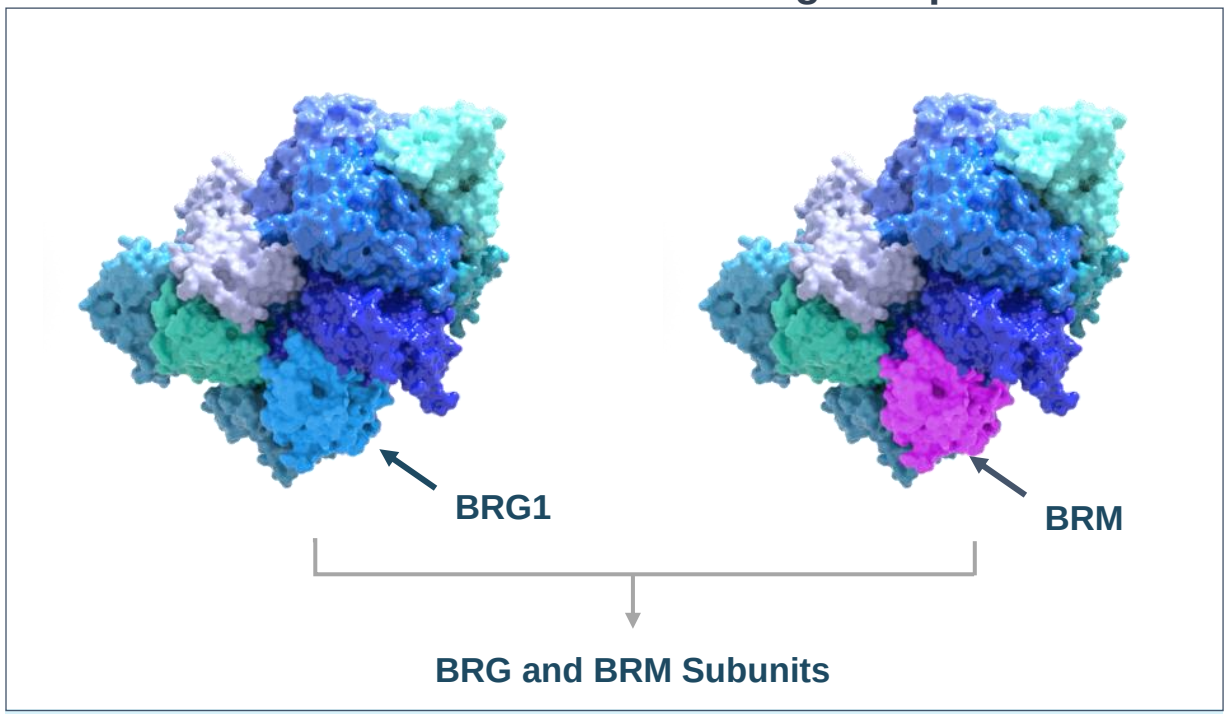
FHD-286 is a Potent, Selective, Allosteric, Small Molecule Inhibitor of the BRG1 and BRM subunits of the BAF complex

FHD-286 Targets Abnormal Dependencies on BAF in Cancer

Target / Approach	• BRG1/BRM ATPase • Small molecule, allosteric, oral enzymatic inhibitor
Indications	• Acute myelogenous leukemia (AML) • Uveal melanoma • Indication expansion work ongoing in multiple solid tumors
Mutation / Aberration	• **AML**: Elevated BRG1-BAF / TF activity in AML blast cells • **Uveal Melanoma**: GNAQ/GNA11 mutated UM is driven by dependency on BAF / TF activity
Program Status / Milestones	• Phase I studies enrolling in AML and metastatic uveal melanoma • Phase I data as early as Q4'21
New Patients Impacted / Year*	• **AML**: **Over 20,000 relapsed and/or refractory patients** • **Uveal melanoma: Over 5,000 patients**

* US

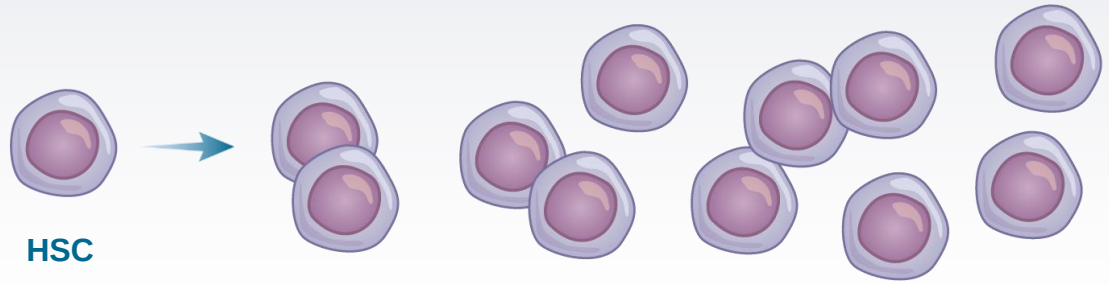
BAF Chromatin Remodeling Complex



- **BRM/BRG1 is the engine (ATPase) of the BAF chromatin remodeling complex**
- **BRG1 & BRM are highly similar proteins**

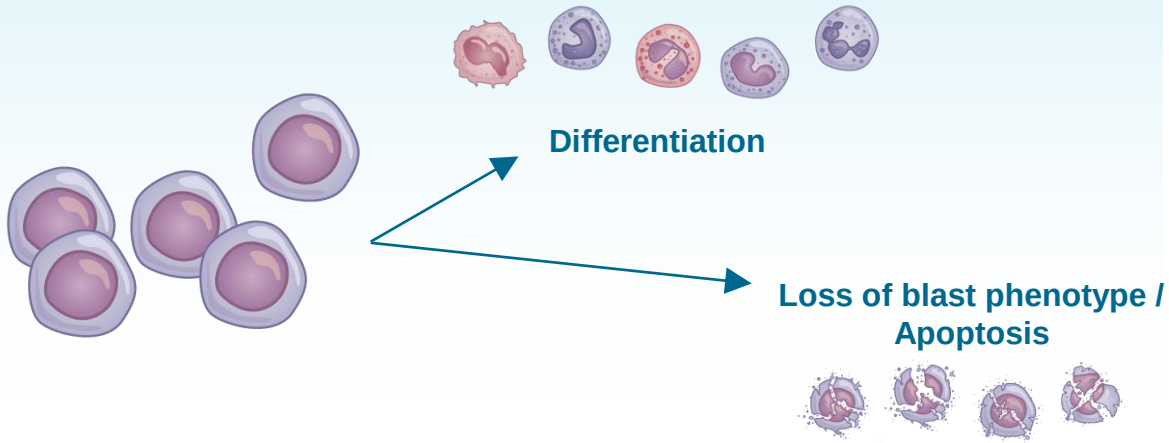
AML Dependent on BRG1 / Lineage Dependent TF Interaction

Disease State

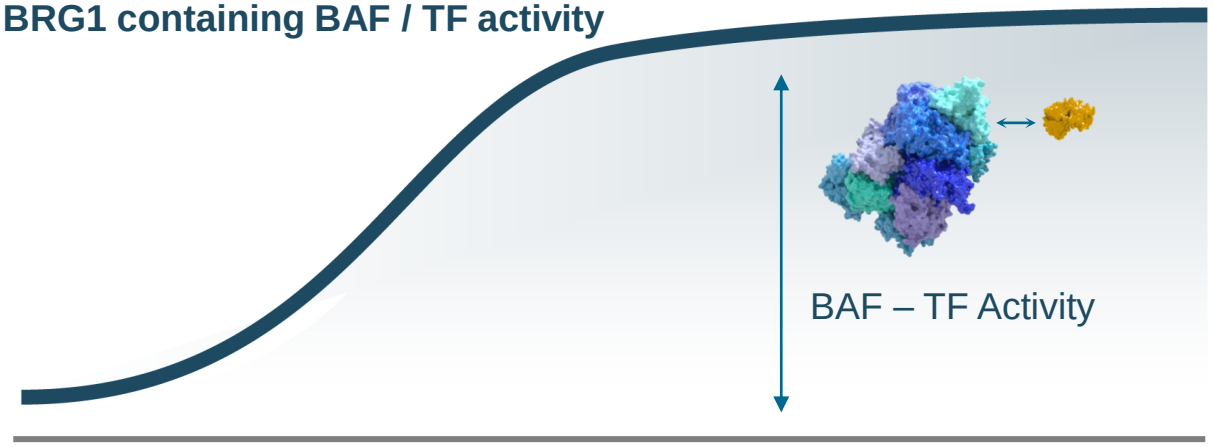


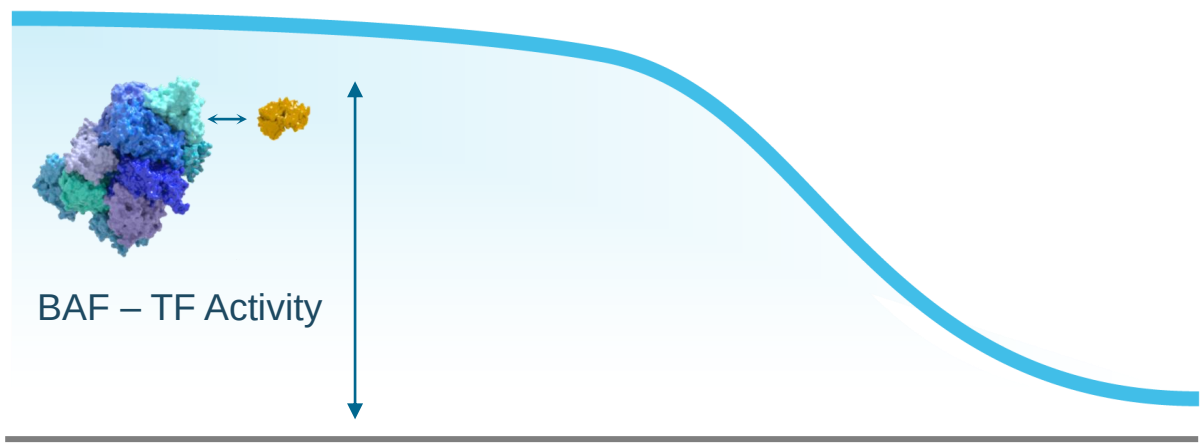
AML blasts stuck in BAF / TF dependent proliferative phase

Treatment with FHD-286



Cancerous blast cells rely on BRG1 containing BAF / TF activity





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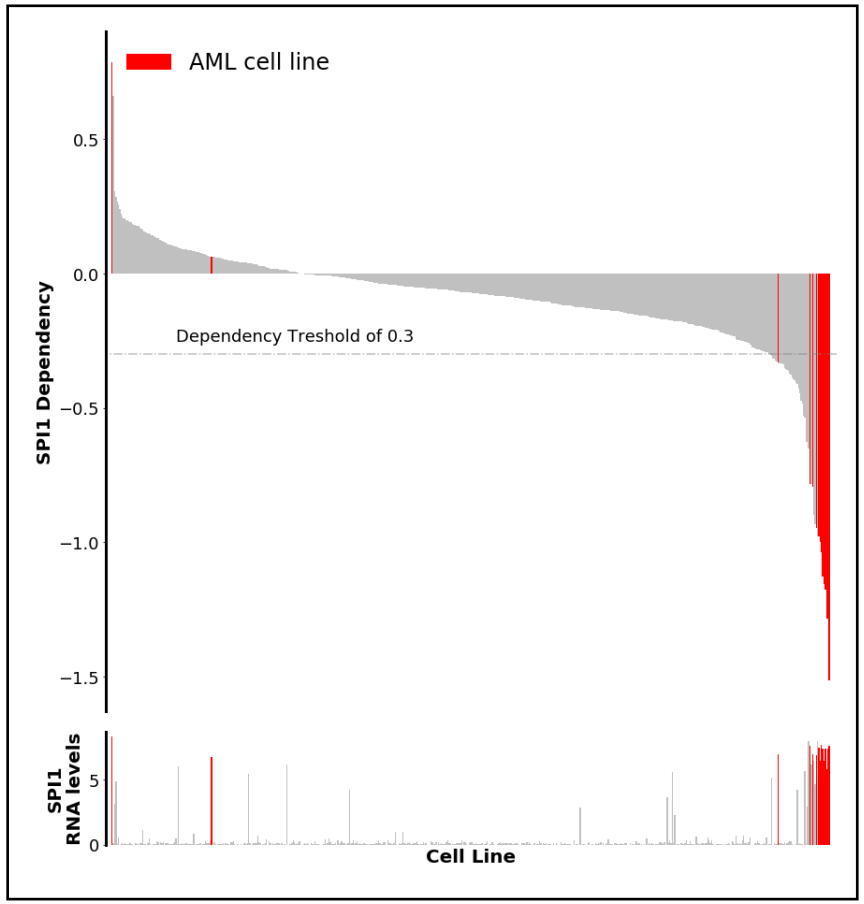
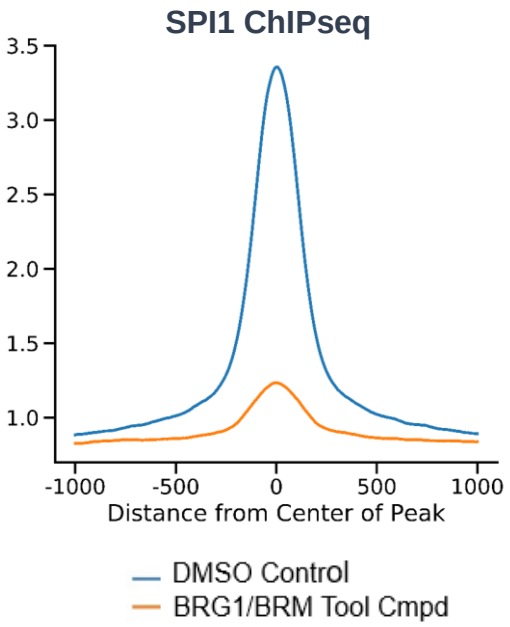
AML Dependent on BRG1 / Lineage Dependent TF Interaction

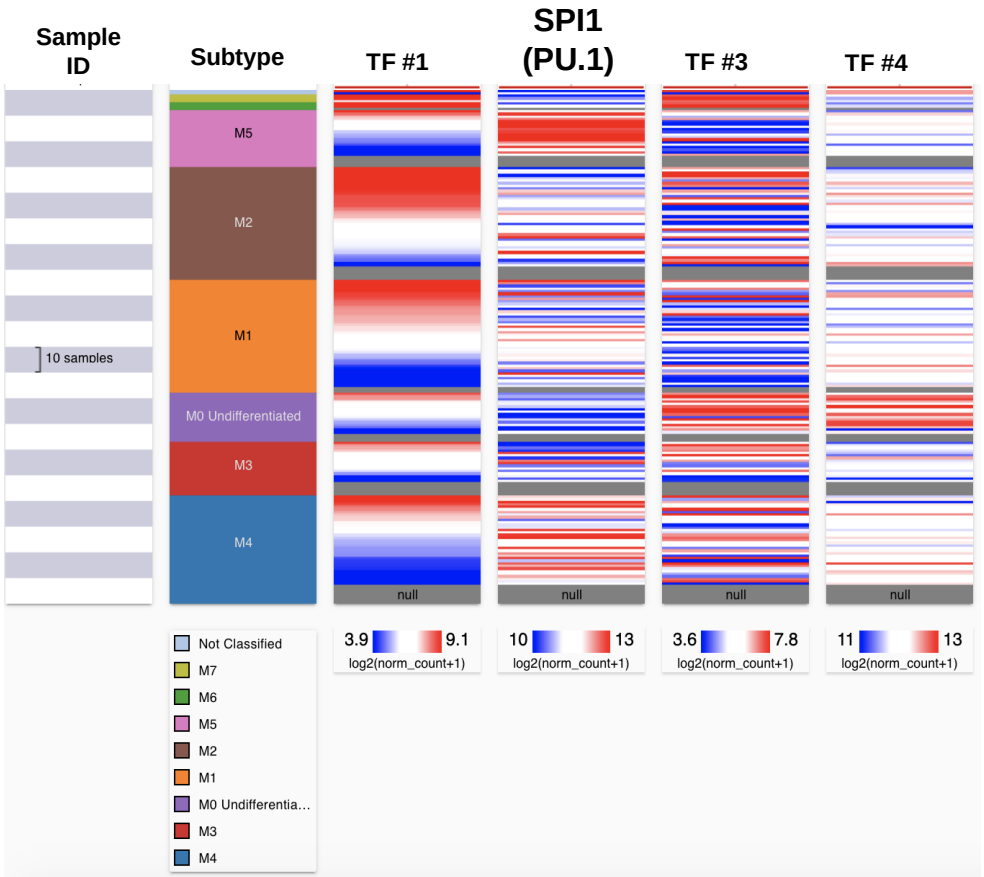
SPI1 (PU.1) / BAF Dependency



BRG1 Inhibition Leads to Down Regulation of SPI1 (PU.1)



TF Association with AML by FAB Classification: 70%



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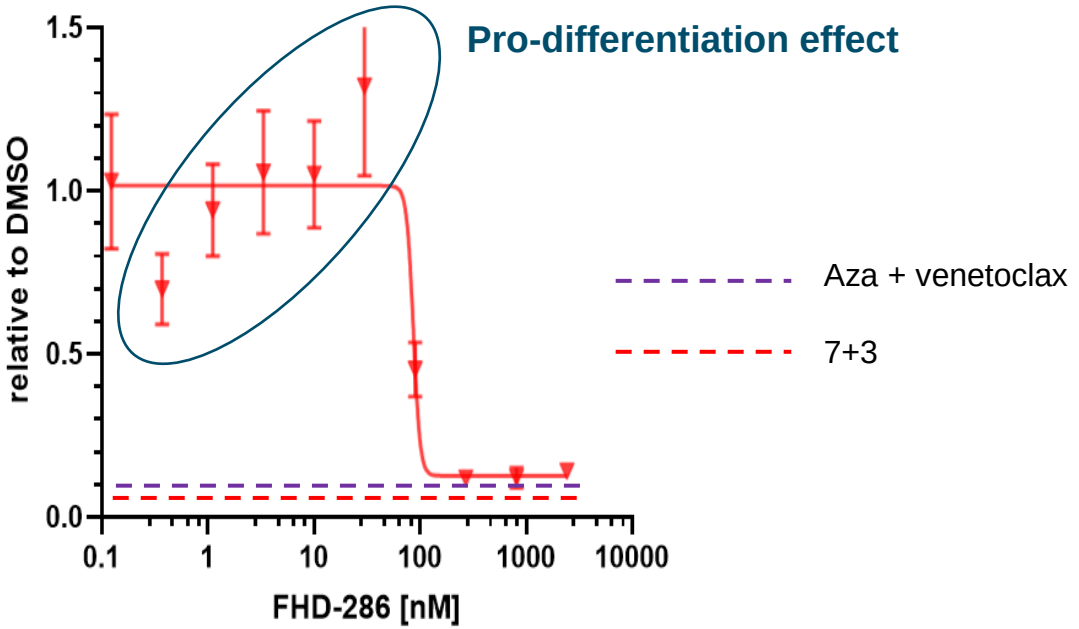
FHD-286 Shows Broad Efficacy Across AML Patient Derived Samples

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 = Complete reduction in blast cells
~ = Partial reduction
N = No response

1695AML1 – BM-secondary



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

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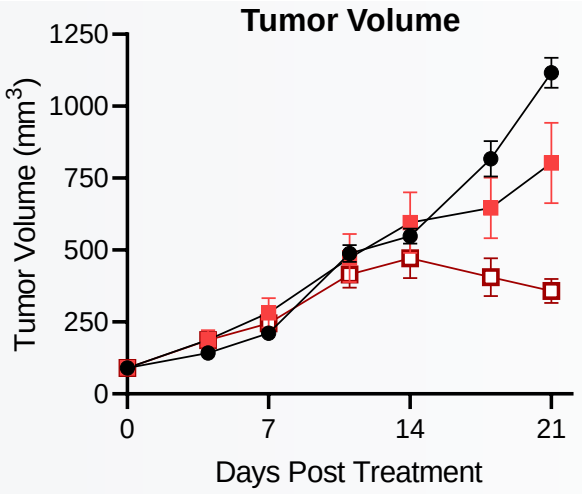
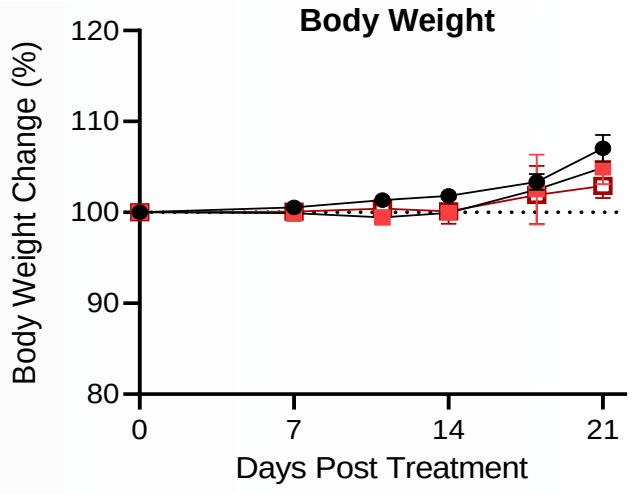
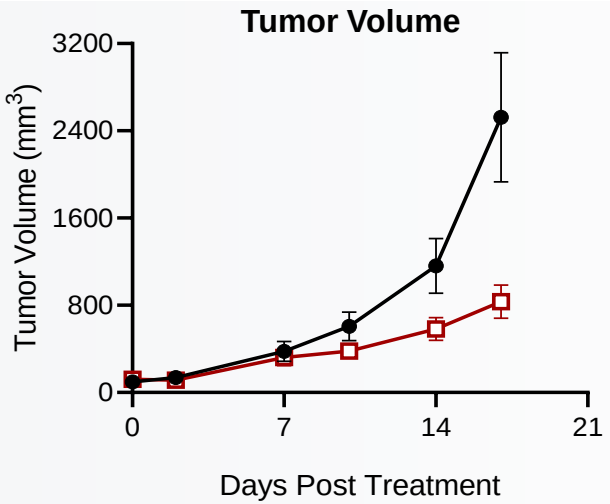
Dose-Dependent Tumor Growth Inhibition Observed with FHD-286 Treatment in AML CDX Models

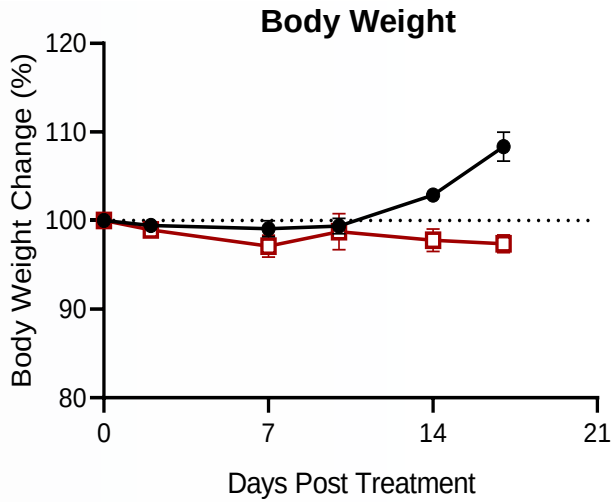
MV4-11 CDX Model
(FLT3 ITD, MLL-AF4)





OCI-AML2 CDX Model
(MII-AF6, DNMT3a mut.)





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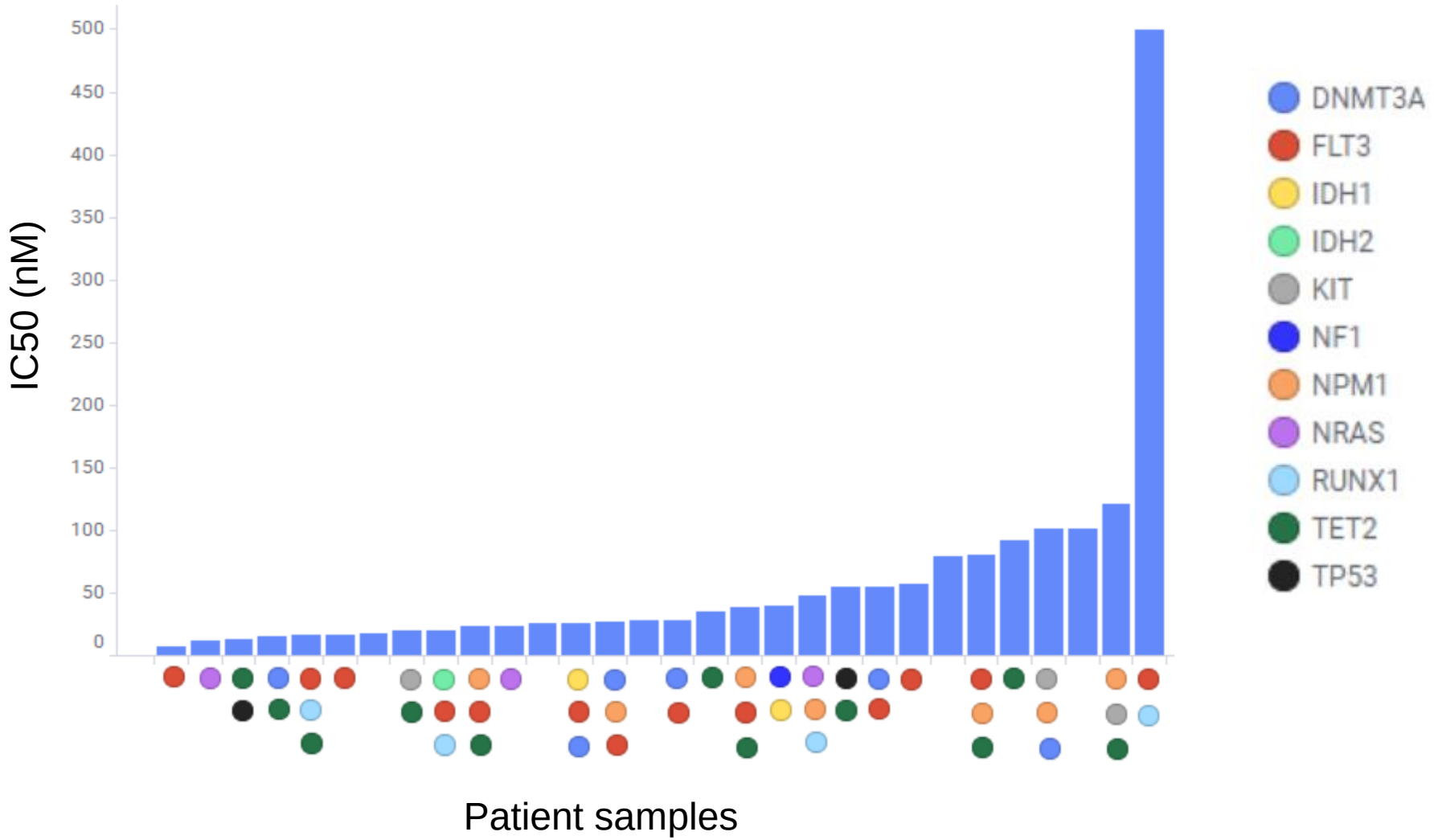
FHD-286 Shows Effect Across Range of Mutations in AML Patient Derived Samples



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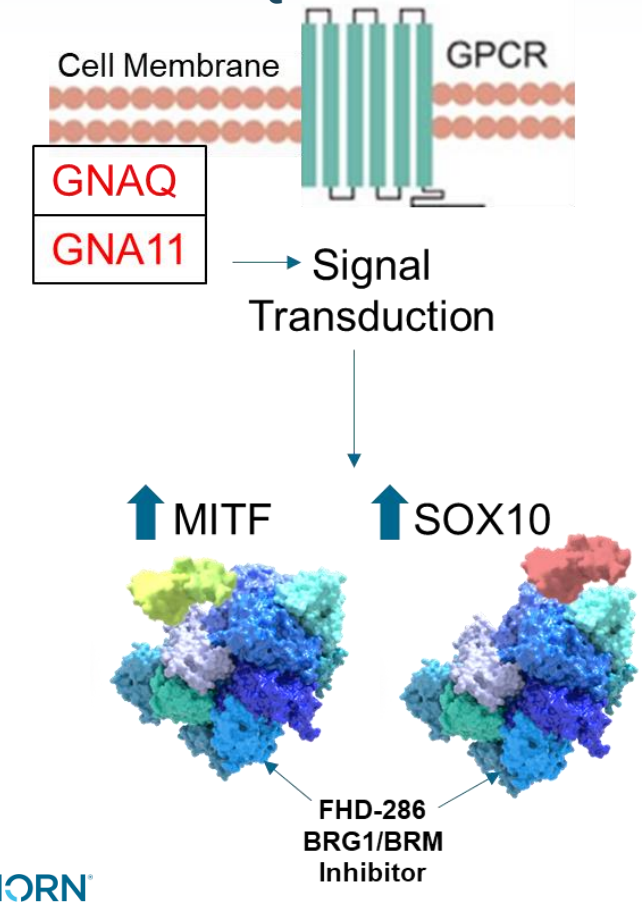
Therapeutic Rationale for Uveal Melanoma: Dependency on Overexpression of the MITF / SOX10 Transcription Factors and the BAF Complex

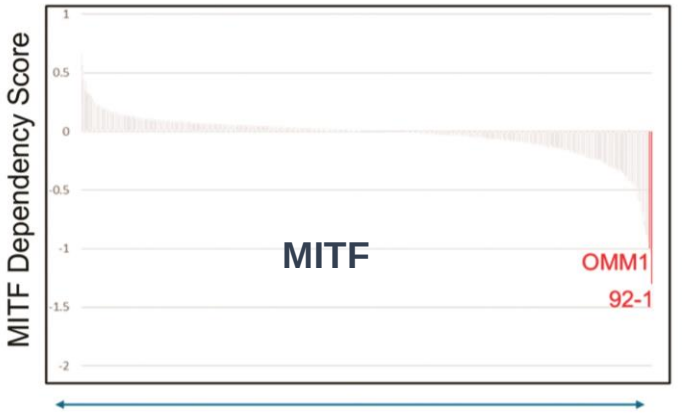
Inhibiting BRG1/BRM to Shut Down the Abnormal TF Interaction with the BAF Complex

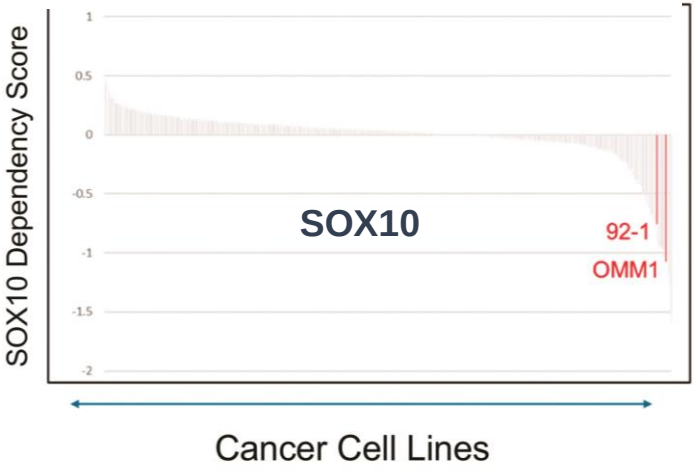
Biology

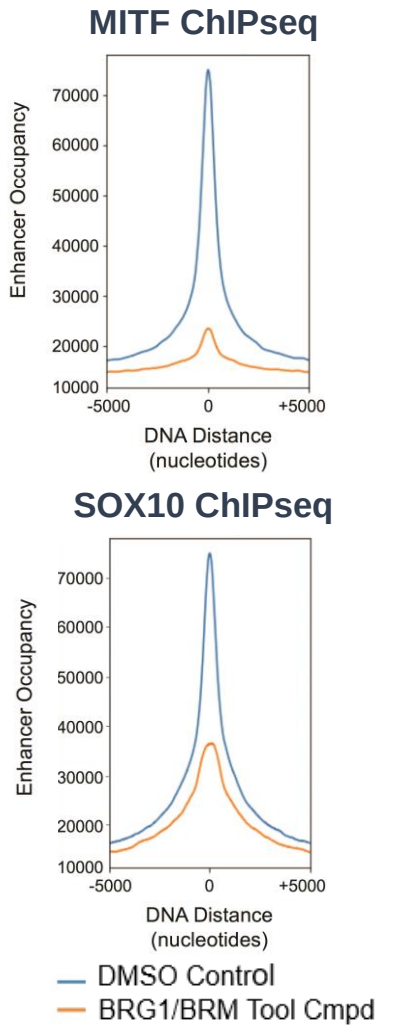
Over 85% of uveal melanoma cancers have GNAQ or GNA11 mutations



Validation of Dependency and Approach







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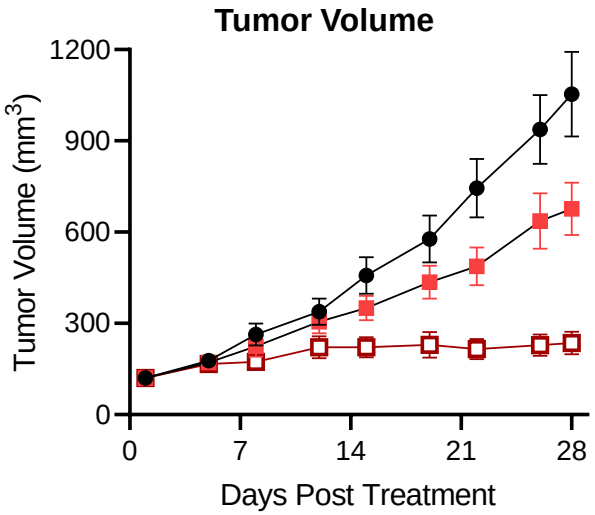
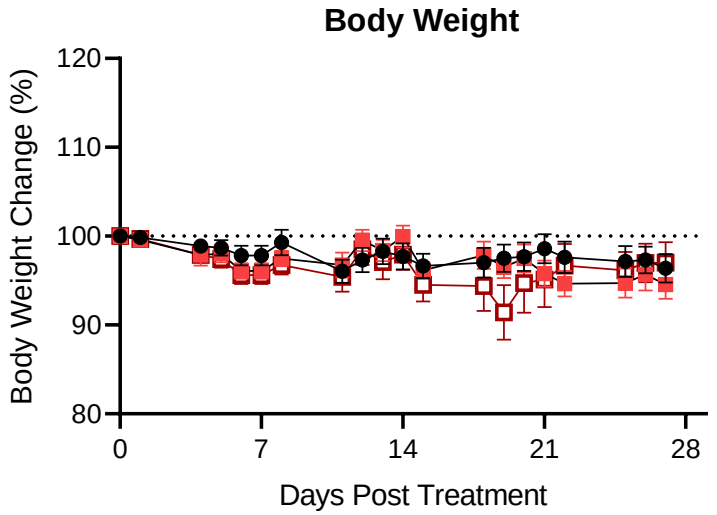
FHD-286 was Associated with Dose-Dependent Tumor Regression in Uveal Melanoma CDX Models at Tolerated Doses

MP-46 uveal melanoma CDX model

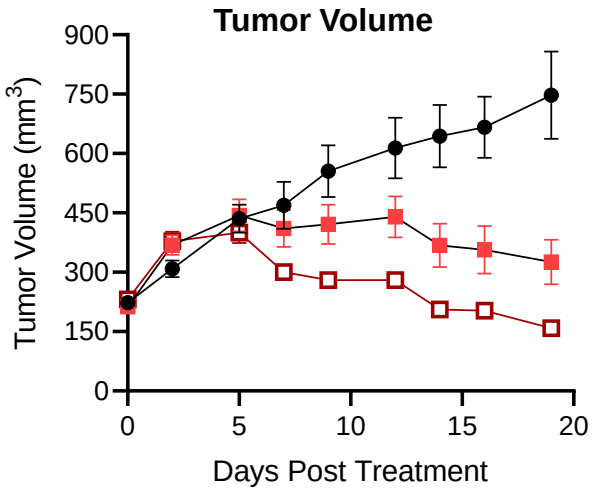
- Dose-dependent tumor growth inhibition
- Well tolerated

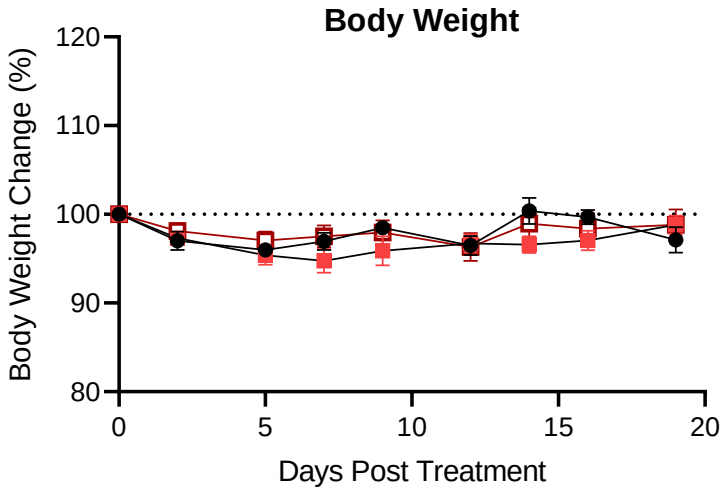




92-1 uveal melanoma CDX model

- 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

FOGHORN THERAPEUTICS

FHD-286 Clinical Development Plan

CLINICAL PLAN

AML & Uveal Melanoma FIH Phase 1 Studies

Relapsed / Refractory AML

Metastatic Uveal Melanoma

Trial Designs

- Single patient accelerated titration (n=1)
- Convert to 3+3 once relevant PK/PD, safety or clinical activity observed
- Retrospective biomarker analysis to further evaluate safety and efficacy
- Assess safety, PK, biomarkers and efficacy

Expansion cohorts in AML, UM and potentially other indications

Potential for entry into definitive efficacy trials in AML

Potential for entry into definitive efficacy trials in metastatic uveal melanoma

Potential for Indication Expansion Beyond AML and UM

Clinical data as early as Q4 2021

FOGHORN® THERAPEUTICS

FHD-609: Clinical Entry Point – Synovial Sarcoma

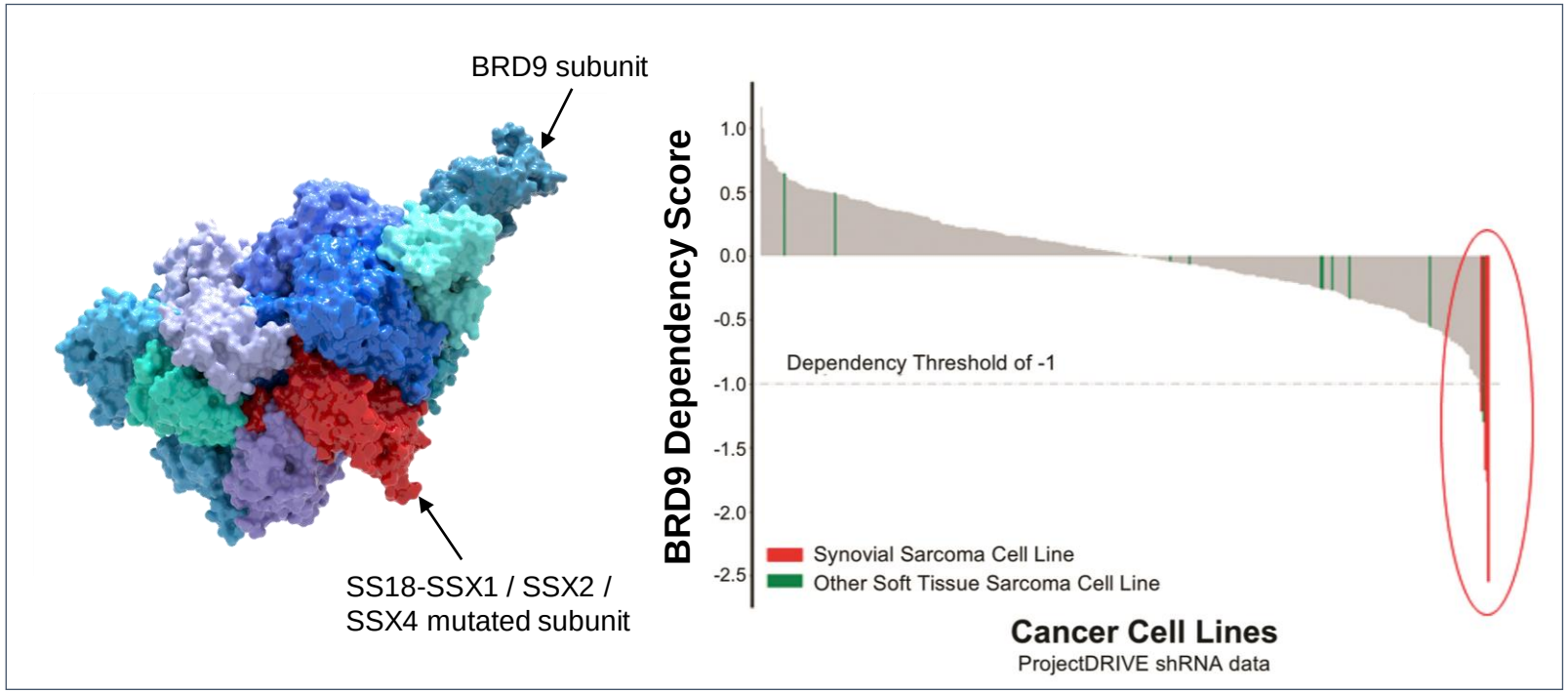
FHD-609 is a Selective, Potent, Protein Degrader of the BRD9 component of the BAF complex

FHD-609 Targets and Degrades the BRD9 subunit of BAF which is Required for Synovial Sarcoma Cells to Survive

Selective, Potent BRD9 Targeted Protein Degrader

Target / Approach	• BRD9 • Intravenous Protein Degrader
Initial Indication	• Synovial Sarcoma
Mutation / Aberration	• SS18-SSX1 / SSX2 / SSX4 protein fusions
Program Status / Milestones	• Phase I data as early as H1’22
New Patients Impacted / Year*	• **Synovial Sarcoma: Over 1,800 patients / year**

* US, EU5, Japan



- **BRD9 is required for the survival of synovial sarcoma cells**

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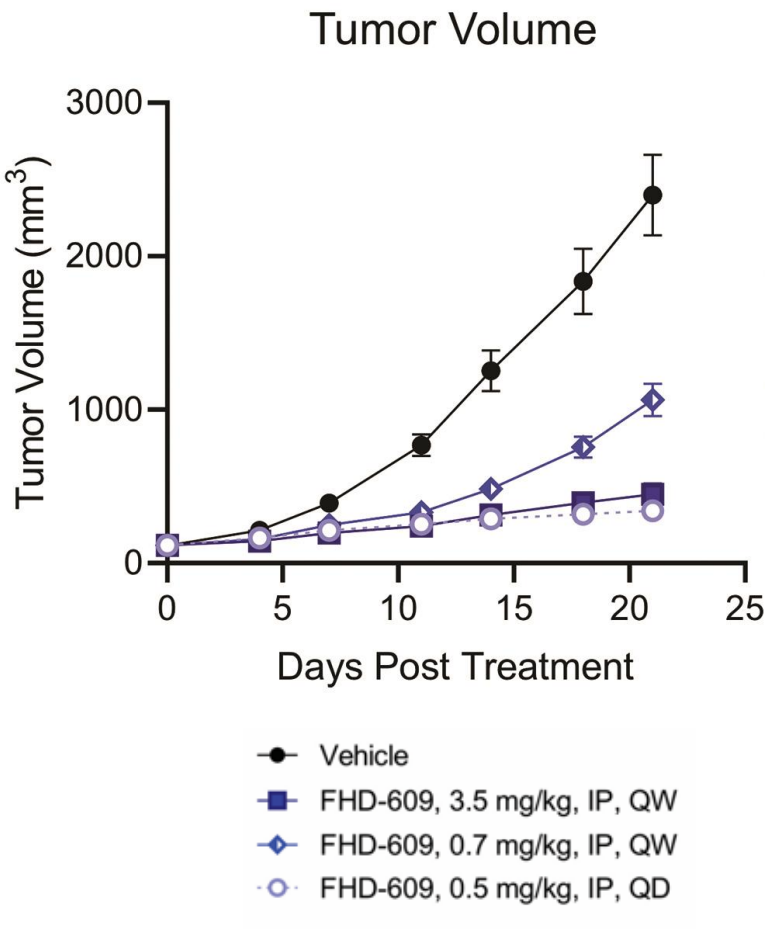
Robust *in vivo* Activity Observed in Synovial Sarcoma Model and BRD9 Degradation Associated with FHD-609 Treatment

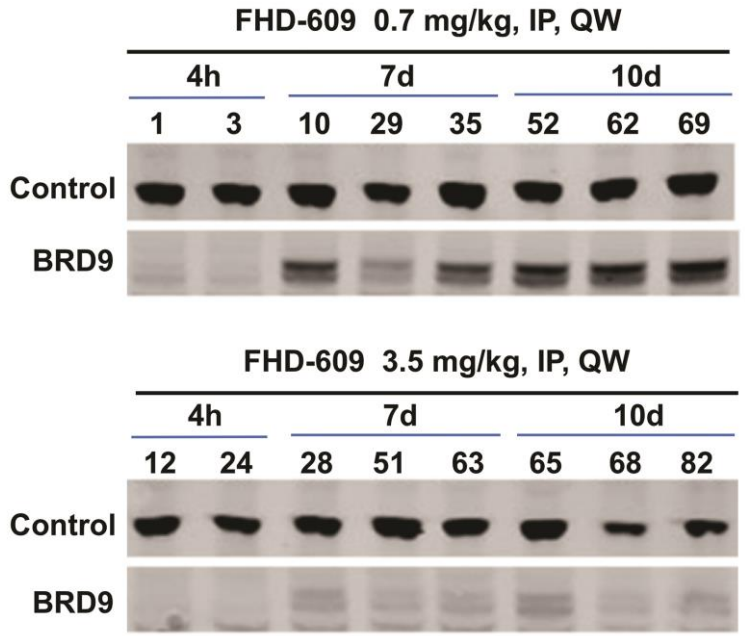
Weekly Dosing of FHD-609 Achieved Sustained BRD9 Degradation

SY01 Synovial Sarcoma CDX Model

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



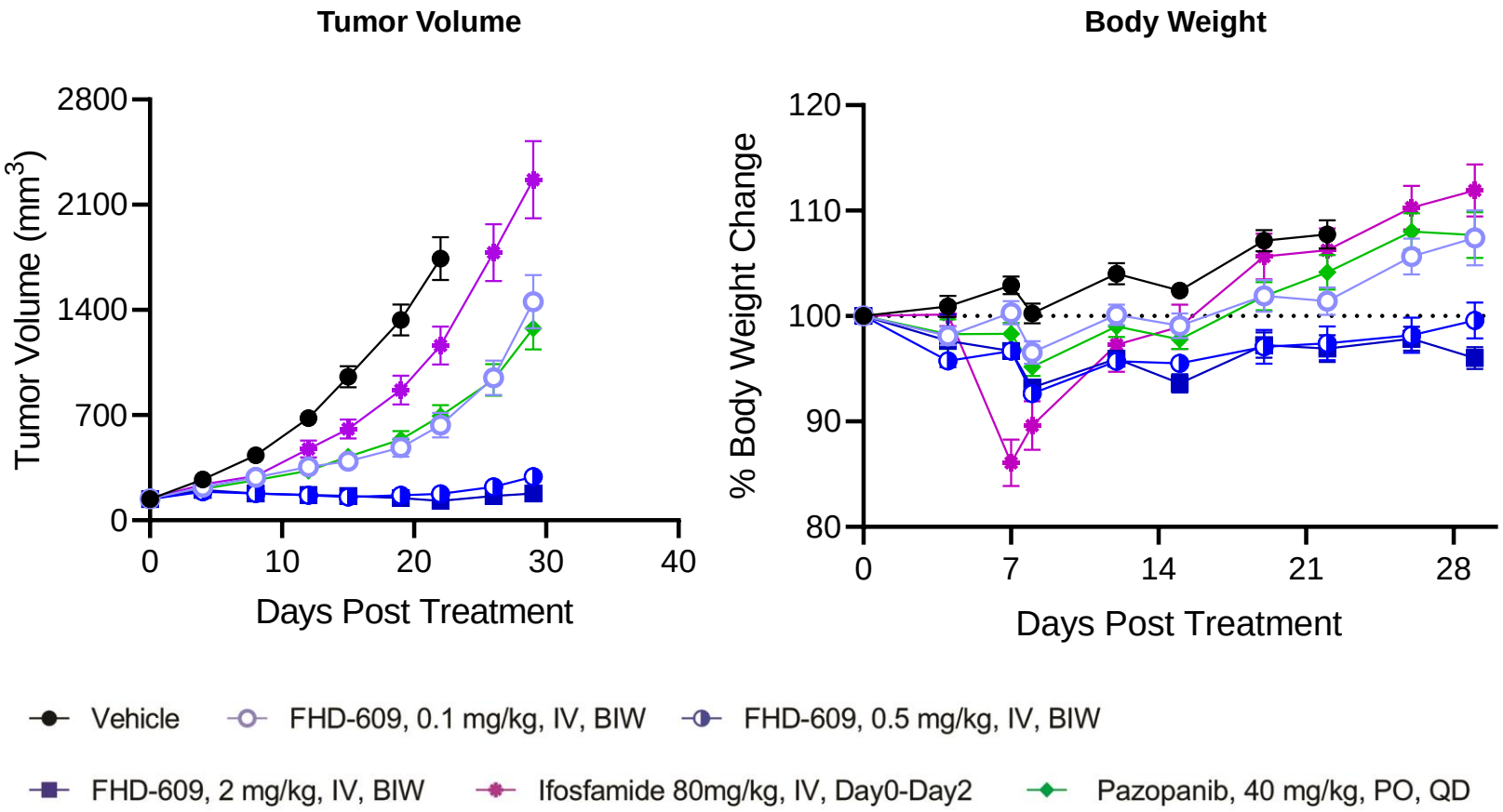
- **Sustained BRD9 Degradation**



Superior Tumor Growth Inhibition of 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 Clinical Development Plan

CLINICAL PLAN

Synovial Sarcoma FIH Phase 1

Metastatic Synovial Sarcoma

Synovial Sarcoma expansion cohorts

SMARCB-1 deleted tumors and potentially other indications

Potential for entry into definitive efficacy trials in synovial sarcoma

Trial Designs

- Single patient accelerated titration (n=1)
- Convert to 3+3 once relevant PK/PD, safety or clinical activity observed
- Assess safety, PK, clinical activity and biomarkers

Biomarkers:

- SS18-SSX1, SS18-SSX2 or SS18-SSX4 translocation

Clinical data as early as H1 2022

FOGHORN® THERAPEUTICS

Selective BRM Modulators for BRG1 Mutated Cancers

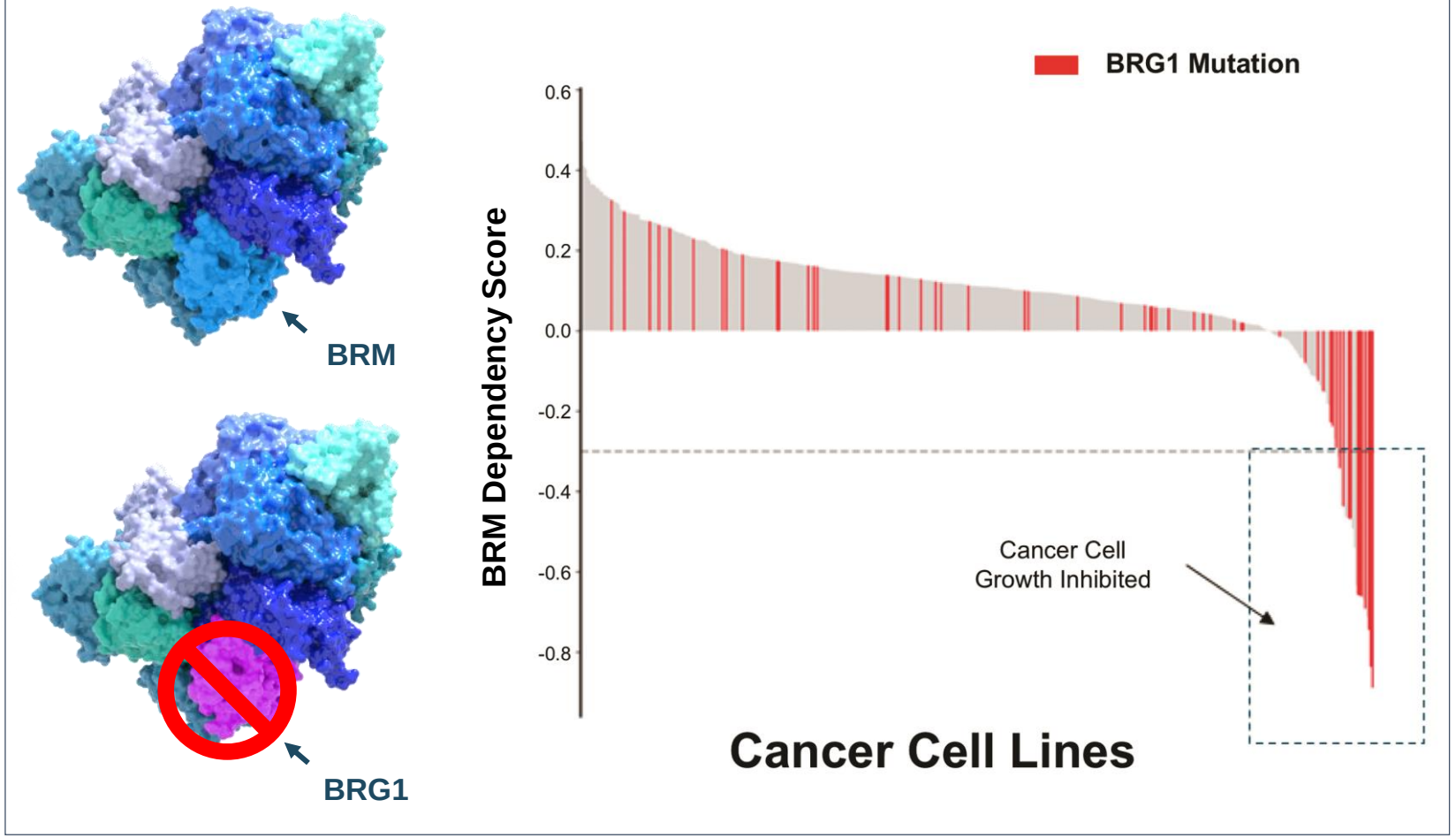
Enzymatic Inhibitor and Protein Degrader Programs

BRG1 Mutations Create a Genetic Dependency on BRM

Selective BRM Modulators Overview

Target / Approach	• BRM • Enzymatic inhibitor • Targeted protein degrader
Indication	• BRG1 mutated cancers (e.g., NSCLC), 30+ cancers with BRG1 mutations
Mutation / Aberration	• BRG1
Stage	• Pre-clinical
New Patients Impacted / year*	• **> 100,000**

* US, EU5, Japan



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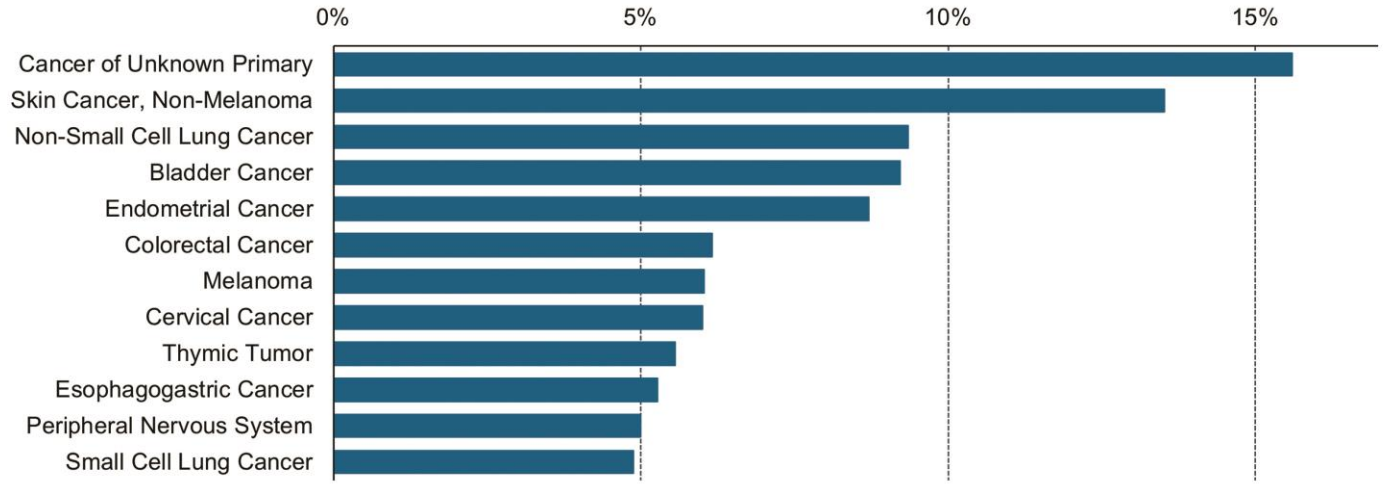
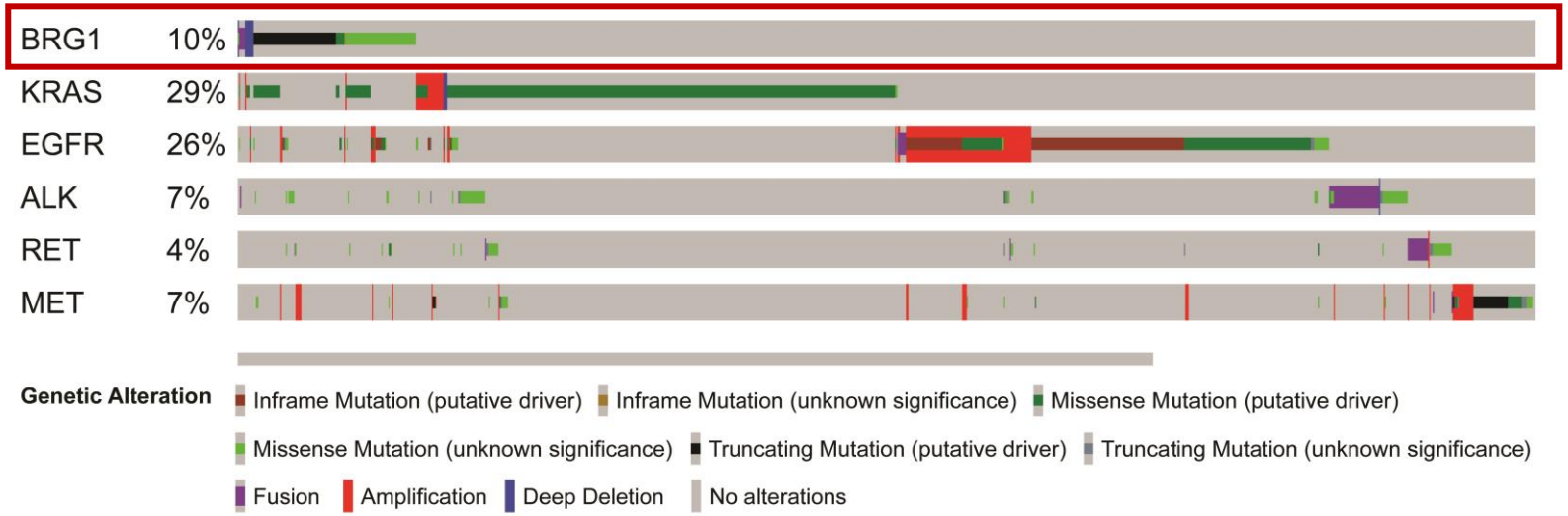
BRG1 Mutated in ~5% of All Tumors – Potential Broad Addressable Patient Populations



BRG1 mutated across range of tumors

Accounts for ~5% of all tumors



BRG1 mutated in up to 10% of NSCLC tumors, minimal overlap with other mutations

FOGHORN THERAPEUTICS

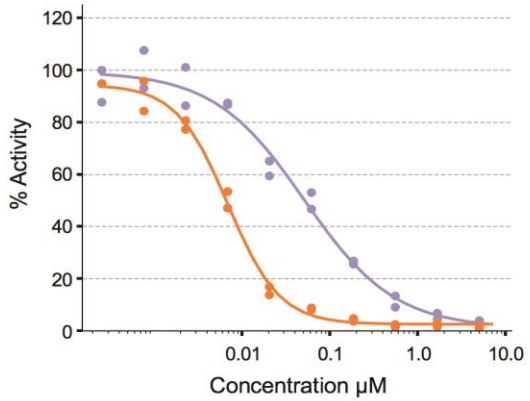
20X Selective BRM Inhibitor and Targeted Protein Degrader Discovered from Gene Traffic Control Platform

Selective BRM Modulators

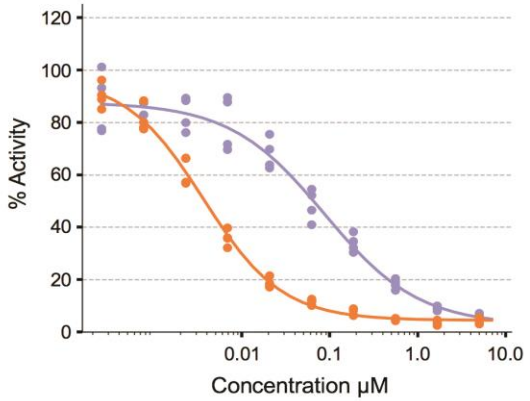
BRM Selective Inhibitor Program

- Panel showing biochemical selectivity of a 20X more selective inhibitor of BRM vs. BRG1

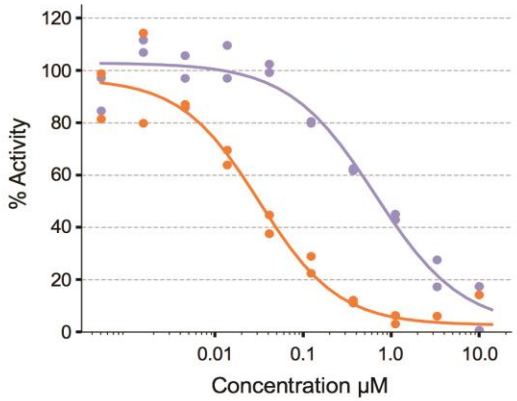
Enzyme assay using BRG1 and BRM subunits



Enzyme assay using BRG1 and BRM containing full BAF complexes

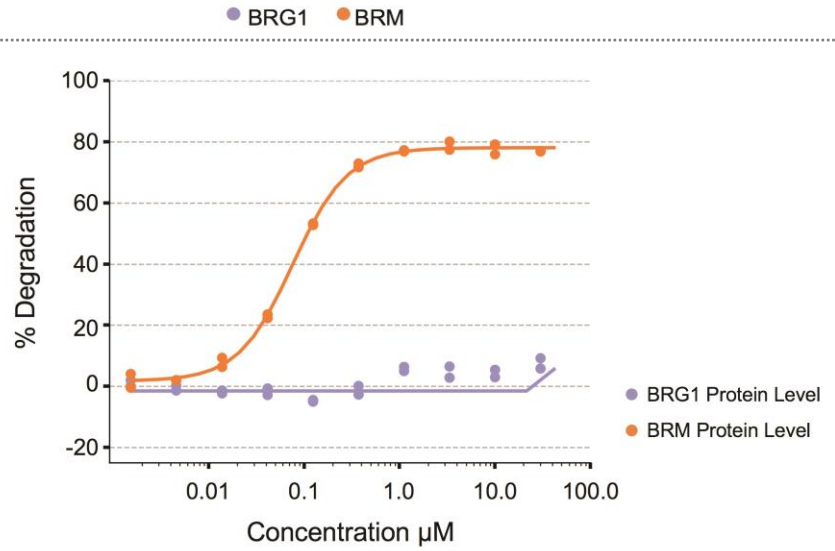


Cellular assays for BRG1 and BRM



BRM Selective Degrader Program

- Selective BRM degrading molecules led to the degradation of over 75% of BRM while leaving BRG1 unchanged



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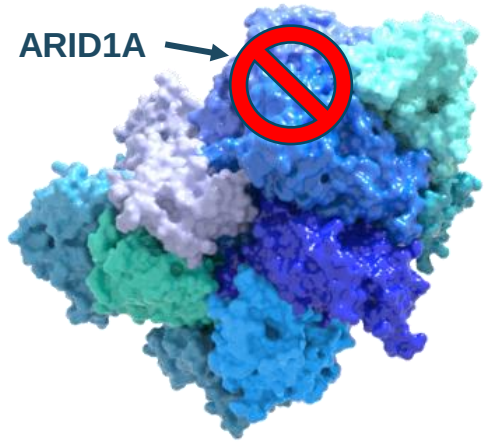
FOGHORN® THERAPEUTICS

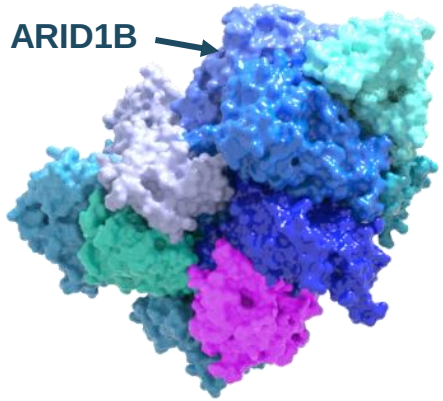
Selective ARID1B Protein Degrader for ARID1A Mutated Cancers

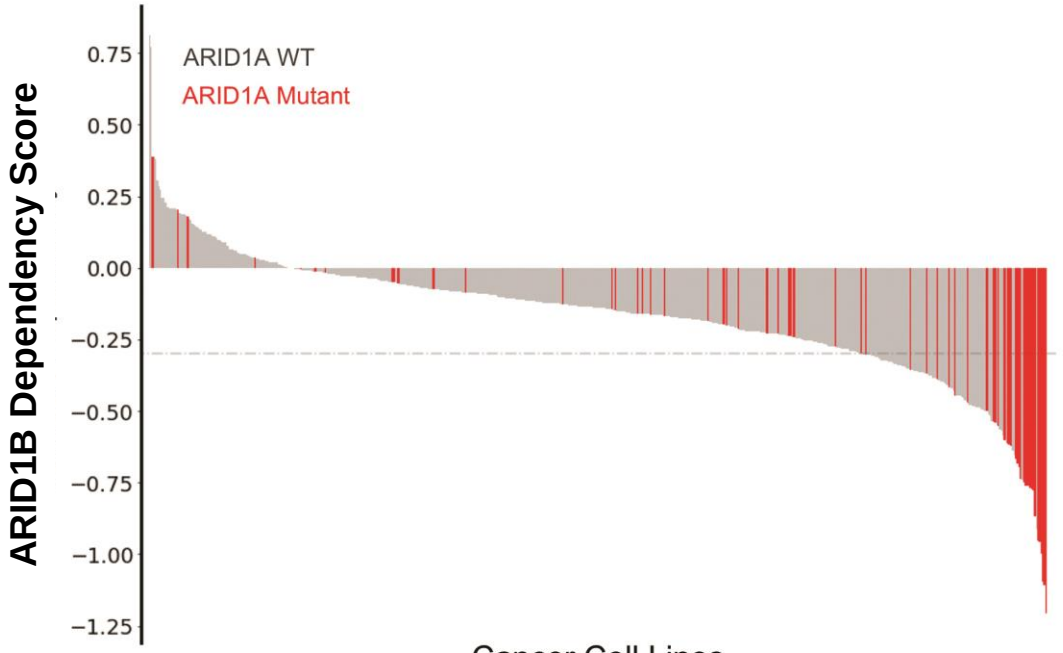
ARID1A – Most Mutated Subunit in BAF Complex – Creates Dependency on ARID1B

Selective ARID1B Protein Degrader Overview

Target / Approach	• ARID1B • Targeted Protein Degrader
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**







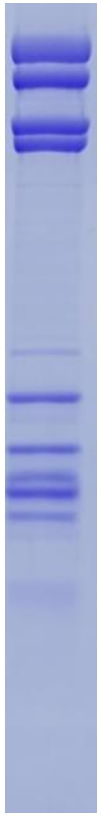
* US, EU5, Japan

FOGHORN THERAPEUTICS

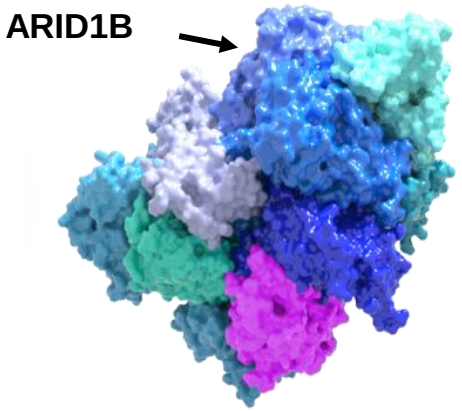
ARID1B Highlights Broad Potential of Foghorn Gene Traffic Control Platform

Biology

- ARID1A is the most highly mutated subunit of the BAF complex in cancer
- ~5% of all tumors harbor ARID1A mutations including; endometrial cancer (~40%), bladder cancer (~25%) and ovarian (~15%)
- Synthetic lethal relationship with ARID1B
- Developing protein degraders to ARID1B



Highly purified ARID1B-BAF Complex



Drugging Strategy

- Platform produces BAF complexes and subcomplexes containing either ARID1A or ARID1B at scale
- Status: Validating hits from multiple High Throughput Screens

FOGHORN® THERAPEUTICS

Novel Approach to Targeting Transcription Factors

Disrupting Transcription Factor – Chromatin Remodeling Complex Interactions

A New Approach to Drugging Transcription Factors

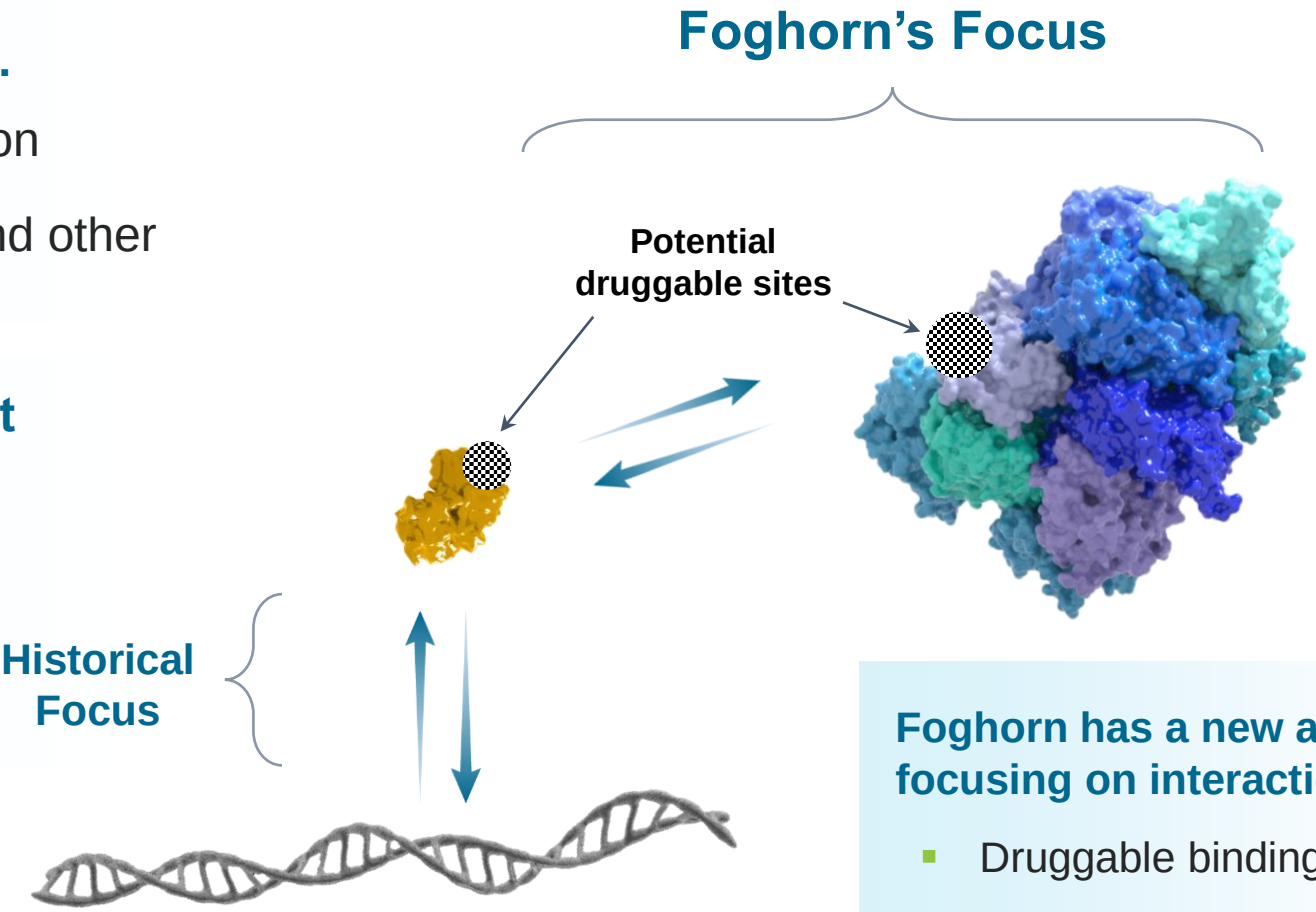
Enabled by Proprietary Ability to Purify and Synthesize Chromatin Regulatory System Components

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

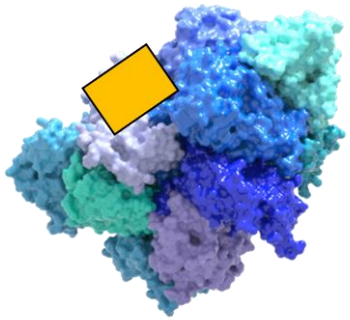
- Druggable binding pockets
- Druggable affinities

FOGHORN THERAPEUTICS

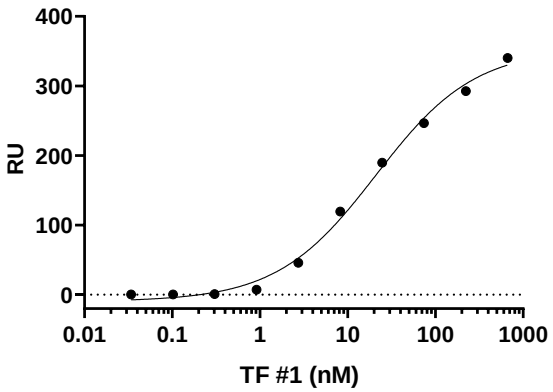
Transcription Factor-Chromatin Remodeling Complex Interactions

Unique Insights in Where and How Transcription Factors Bind

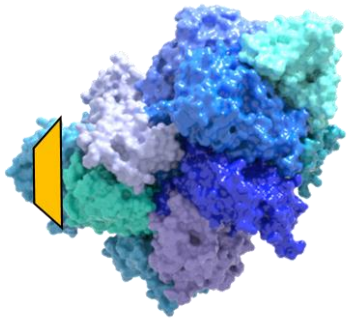
TF #1



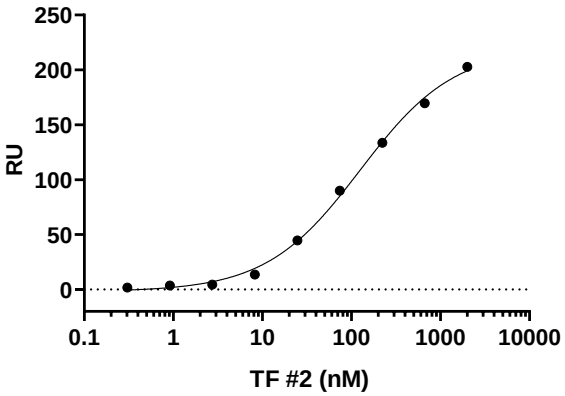
KD = 21 nM



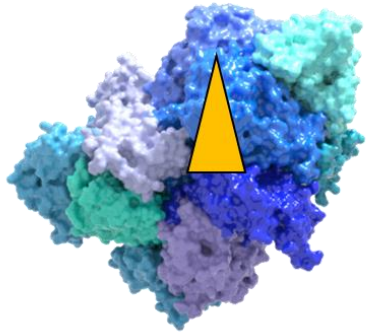
TF #2



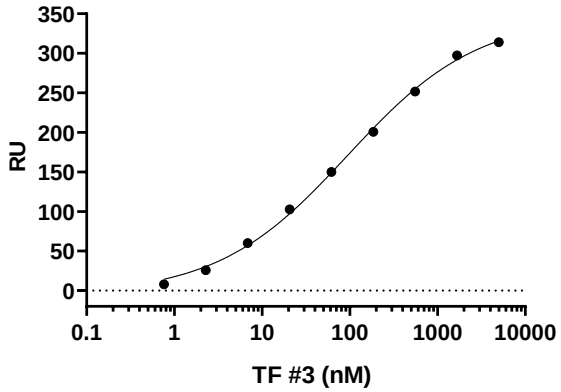
KD = 125 nM



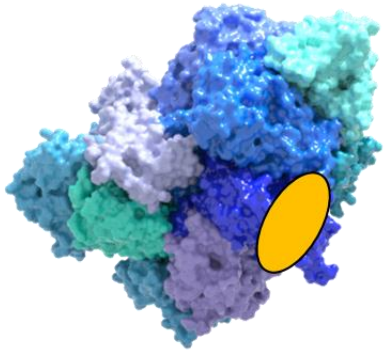
TF #3



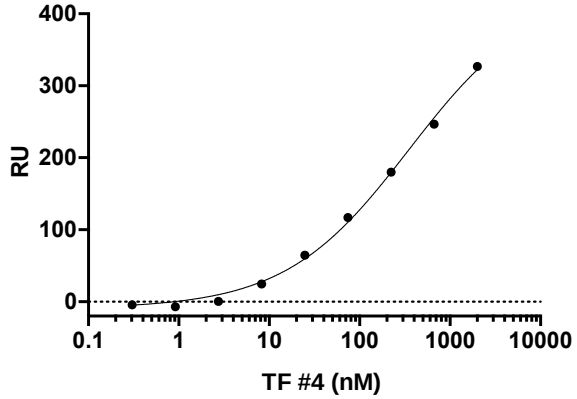
KD = 94 nM



TF #4



KD = 351 nM



Transcription Factors (TF):

FOGHORN THERAPEUTICS

Highly Scalable Approach and Significant Unmet Medical Need

Potential to Drug > 100 TFs Associated with BAF

- **>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

- **Merck collaboration to drug single specified transcription factor target**
- **$425 million in up-front, research, development and sales-based milestones**
- **Up to low double-digit royalties on product sales**

Investment Highlights

LARGE MARKET POTENTIAL

- Biology implicated in up to 50% of cancer potentially impacting ~2.5 million patients
- Potential applications beyond oncology in diseases including virology, autoimmune disease and neurology

WELL FUNDED

- $160.9 million cash and equivalents as of 3/31/2021

EXPERIENCED LEADERSHIP TEAM

- Expertise across drug discovery, clinical development and commercialization
- Over 220 drug candidates into the clinic and over 30 drugs approved

MEANINGFUL UPCOMING MILESTONES

- Phase I FHD-286 data as early as Q4’21
- Phase I FHD-609 data as early as H1’22

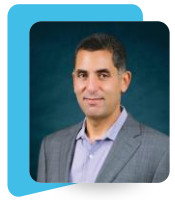
FOGHORN® THERAPEUTICS

Appendix

Proven Leadership Team

Adrian Gottschalk, President & CEO

Biogen

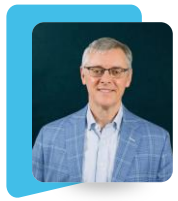


Sam Agresta, M.D., M.P.H., CMO

agios · Genentech (A Member of the Roche Group) · Infinity

Carl Decicco, Ph.D., CSO

Bristol-Myers Squibb



Michael LaCascia, CLO

VERTEX · WilmerHale

Allan Reine, M.D., CFO

pieris · 17 96 Lombard Odier

Steve Bellon, Ph.D., SVP, Drug Discovery

Constellation Pharmaceuticals · AMGEN · VERTEX

Fanny Cavalie, SVP, Business & Operations

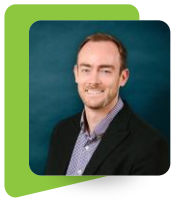
Biogen · McKinsey & Company

Carlos Costa, SVP, HR

Biogen · P&G · Roche

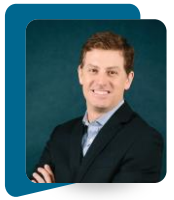
Ryan Kruger, PhD, VP, Biology

gsk GlaxoSmithKline



David Millan, Ph.D, VP, Chemistry

forma Therapeutics · VERTEX · Pfizer



Scott Innis, VP, Program Leadership

Biogen · LEERINK

Jacqueline Cinicola, VP Regulatory Affairs

agios · Millennium Pharmaceuticals, Inc

Murphy Hentemann, Ph.D., VP Program Leadership

NOVARTIS · AstraZeneca

Chong-Hui Gu, VP, CMC and QA

agios · Bristol-Myers Squibb

Nicola Majchrzak, VP, Clinical Development

Infinity

FOGHORN THERAPEUTICS

Experienced Leadership Team with Industry Leading Advisors and Investors

BOARD OF DIRECTORS

Doug Cole, M.D.
Flagship Pioneering – Board Chair; Founder

Cigall Kadoch, Ph.D.
Dana-Farber, Broad, HMS; Founder

Scott Biller, Ph.D.
Former CSO and Strategic Advisor, Agios

Adam Koppel, M.D., Ph.D.
Bain Capital Life Sciences

Simba Gill, Ph.D.
Evelo Biosciences, Partner at Flagship Pioneering

Michael Mendelsohn, M.D.
Cardurion Pharmaceuticals

Adrian Gottschalk
Foghorn President & CEO

Ian Smith
Exec. Chair of Solid Bio., Chair of ViaCyte, Former COO of Vertex

SCIENTIFIC AND OTHER ADVISORS

Charles Sawyers, M.D.
MSKCC, HHMI – SAB Chair

Gerald Crabtree, M.D.
Stanford, HHMI; Founder

Faheem Hasnain
Gossamer Bio, Chair of Mirati

David Schenkein, M.D.
General Partner, GV

Craig Peterson, Ph.D.
Professor UMass Medical School

Tony Kouzarides, Ph.D.
Gurdon Institute – University of Cambridge