Salarius PHARMACEUTICALS

Advancing novel and next-generation compounds to address both orphan and large oncology indications

Nasdaq: SLRX

December 2022

Safe Harbor Statement

This presentation contains “forward-looking statements” within the meaning of the Private Securities Litigation Reform Act of 1995. All statements, other than statements of historical facts, included in this presentation are forward-looking statements. These forward-looking statements may be identified by terms such as “will,” “future,” “believe,” “developing,” “expect,” “may,” “progress,” “potential,” “could,” “look forward,” “might,” “should,” and similar terms or expressions or the negative thereof. Examples of such statements include, but are not limited to, statements relating to the following: the advantages of seclidemstat (SP-2577) as a treatment for Ewing sarcoma, Ewing-related sarcomas, and other cancers and its ability to improve the life of patients; expected cohort readouts from the Company’s clinical trials and expected therapeutic options for SP-2577 and related effects and projected efficacy, including SP-2577’s ability to inhibit LSD1; the future of the company’s Phase 1/2 trial of seclidemstat as a treatment for Ewing sarcoma and FET-rearranged sarcomas following the October 2022 suspected unexpected severe adverse reaction (SUSAR) event and resulting partial clinical hold by the U.S. Food and Drug Administration (FDA); the advantages of protein degraders including the value of SP-3164 as a cancer treatment; the timing of clinical trials for SP-3164 and expected therapeutic options for SP-3164 and related effects and projected efficacy; impact that the addition of new clinical sites will have on the development of our product candidates; the timing of our IND submissions to the U.S. Food and Drug Administration (FDA) and subsequent timing for initiating clinical trials; interim data related to our clinical trials, including the timing of when such data is available and made public; our growth strategy; whether the company will develop additional undisclosed cancer-fighting assets in the targeted protein degradation space; expanding the scope of our research and focus to high unmet need patient populations; and the commercial or market opportunity and expansion for each therapeutic option, including the availability and value of a pediatric priority review voucher for in-clinic treatments and potential for accelerated approval. We may not actually achieve the plans, carry out the intentions or meet the expectations or objectives disclosed in the forward-looking statements. You should not place undue reliance on these forward-looking statements. These statements are subject to risks and uncertainties which could cause actual results and performance to differ materially from those discussed in the forward-looking statements. These risks and uncertainties include, but are not limited to, the following: Seclidemstat’s impact in Ewing sarcoma and as a potential new and less-toxic treatment; expected dose escalation and dose expansion; resolution of the FDA’s partial clinical hold on the company’s Phase 1/2 trial of seclidemstat as a treatment for Ewing sarcoma and FET-rearranged sarcomas following the SUSAR; our ability to resume enrollment in the clinical trial following its review of the available data surrounding the SUSAR; the adequacy of our capital to support our future operations and our ability to successfully initiate and complete clinical trials and regulatory submissions; the ability of, and need for, us to raise additional capital to meet our business operational needs and to achieve its business objectives and strategy; future clinical trial results and the impact of such results on us; that the results of studies and clinical trials may not be predictive of future clinical trial results; risks related to the drug development and the regulatory approval process; the competitive landscape and other industry-related risks; and other risks described in our filings with the Securities and Exchange Commission, including its Annual Report on Form 10-K for the fiscal year ended December 31, 2021, as revised or supplemented by its Quarterly Reports on Form 10-Q and other documents filed with the SEC. The forward-looking statements contained in this presentation speak only as of the date of this presentation and are based on management’s assumptions and estimates as of such date. We disclaim any intent or obligation to update these forward-looking statements to reflect events or circumstances that exist after the date on which they were made. You should review additional disclosures we make in our filings with the Securities and Exchange Commission, including our Quarterly Reports on Form 10-Q, Annual Reports on Form 10-K, and Current Reports on Form 8-K. You may access these documents for no charge at http://www.sec.gov. This presentation shall not constitute an offer to sell or the solicitation of an offer to buy, nor shall there be any sale of these securities in any state or other jurisdiction in which such offer, solicitation or sale would be unlawful prior to registration or qualification under the securities laws of any such state or other jurisdiction.

Investment Highlights

Two compounds, each with numerous avenues to create shareholder value	• SP-3164: next generation protein degrader expected to enter the clinic in 2023 • Seclidemstat (SP-2577): a clinical stage reversible LSD1 protein inhibitor
Multiple near-term milestones to catalyze awareness and build value	• SP-3164: Preclinical data in 2022, IND filing in 1H23 for hematologic or blood cancers and/or solid tumors • Seclidemstat: interim clinical data, resolve partial clinical hold
Pipeline features new indications in large market opportunities	• Protein degradation builds on a 2021 $16 billion global opportunity • Protein inhibition immunotherapy combination and blood cancers represent compelling market opportunities
Management team and advisors experienced in bringing drugs to market	• Track record at large pharma and development-stage companies • Includes Eli Lilly, Sanofi, Boehringer Ingelheim, GSK and AbbVie
Cash/equivalents of $16.8 million as of September 30, 2022	• Funds operations through near-term milestones • No debt, clean cap structure

Pipeline Overview

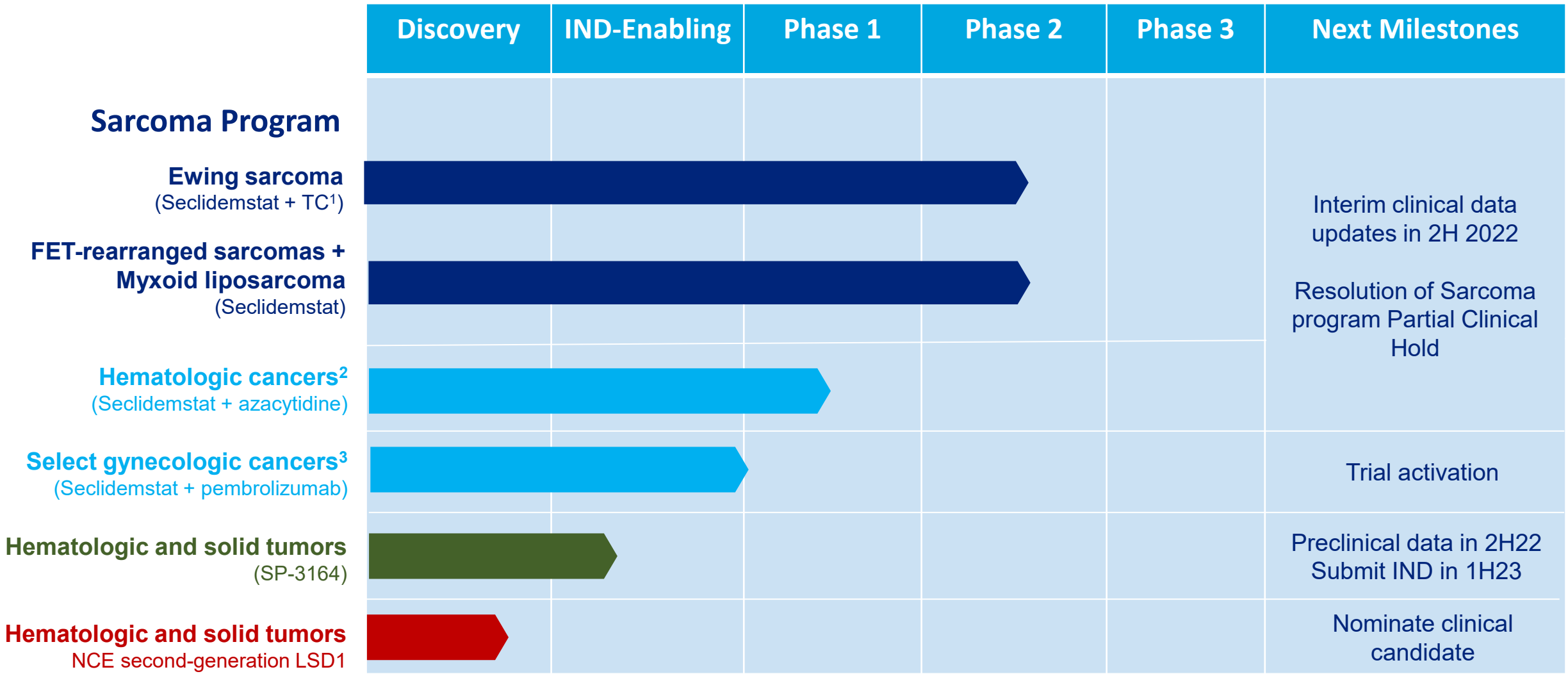
Protein Inhibition

- **Seclidemstat** is a novel oral, *reversible* LSD1 inhibitor in Phase 1/2 clinical trials for solid and hematologic cancers
- MDACC exploring potential larger market indications in hematologic/blood cancers
  - Trial enrollment is currently paused
- Potential for immunoncology combination therapy
- FDA designations for Ewing's sarcoma include:
  - Orphan drug designation grants additional market protection
  - Fast track status provides accelerated access to FDA and sets up potential speed to market for rare sarcoma indications
  - Rare pediatric disease, with possibility for a highly valuable priority review voucher (PRV)
  - Sarcoma trial is currently on partial clinical hold

Protein Degradation

- **SP-3164** is a next-generation cereblon-binding targeted protein degrader (molecular glue)
- Stabilized (S)-avadomide (CC-122) developed for comparable or superior efficacy, with improved safety
- First-generation avadomide demonstrated activity in hematologic malignancies and solid tumors in > 400 patients across 10 clinical trials
- Preclinical data package planned for 2H22
  - 5th Annual TPD Summit October 2022 completed
  - American Society of Hematology December 2022
- IND activation planned for 1H23
- Significant large pharma collaboration and acquisition activity validates technology potential

Product Pipeline



[1] Topotecan and cyclophosphamide [2] Investigator initiated trial active at MD Anderson Cancer Center treating patients with Myelodysplastic Syndromes and Chronic Myelomonocytic Leukemia [3] Investigator initiated trial – Clinical trial agreement not yet finalized.

SP-3164 Protein Degrader

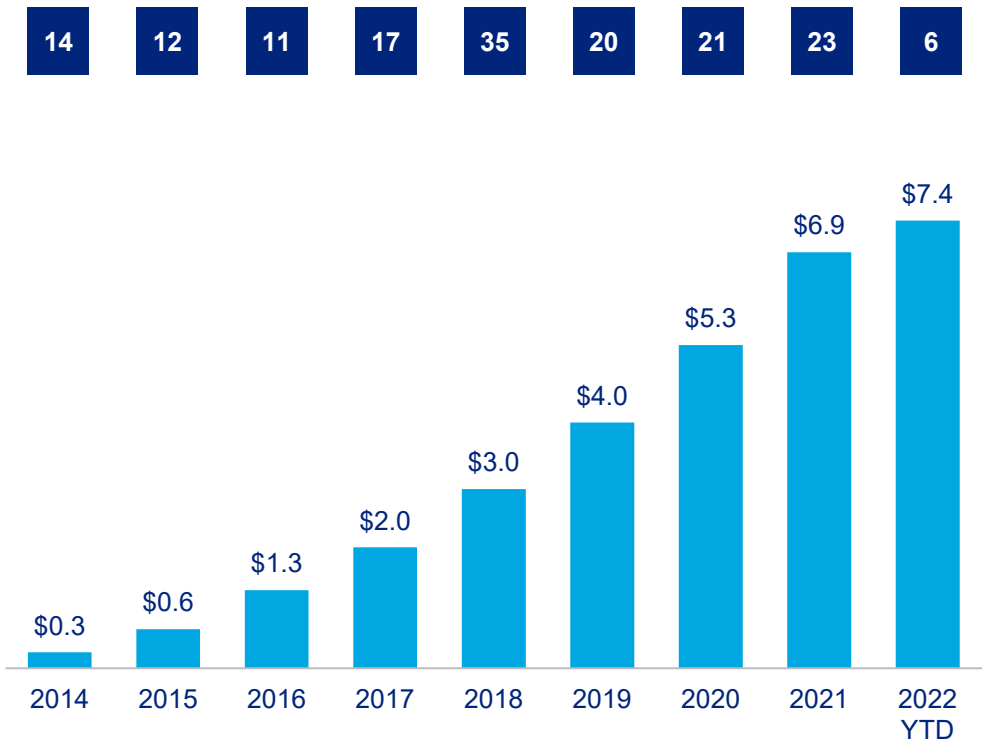
A next-generation molecular glue (MG)

Targeted Protein Degradation Space Has Witnessed Tremendous Growth

Cumulative Capital Invested in Development of Targeted Protein Degrader Therapies[1,2]

($B)

Number of Investments



Large Biopharma Companies Have Moved Aggressively to Gain Exposure[3]

Selected targeted protein partnerships and strategic collaborations since 2015

SANOFI: nurix, KYMERA

BAYER: ARVINAS, VIVIDION Therapeutics

Pfizer: RANOK Therapeutics, ARVINAS

AMGEN: Plexium

Roche: ARVINAS, BAYER, VIVIDION Therapeutics, C4 Therapeutics

gsk: IDEAYA BIOSCIENCES, KYMERA

MERCK: CelerisTx

Lilly: FOGHORN THERAPEUTICS, LYCIA THERAPEUTICS, SEED THERAPEUTICS

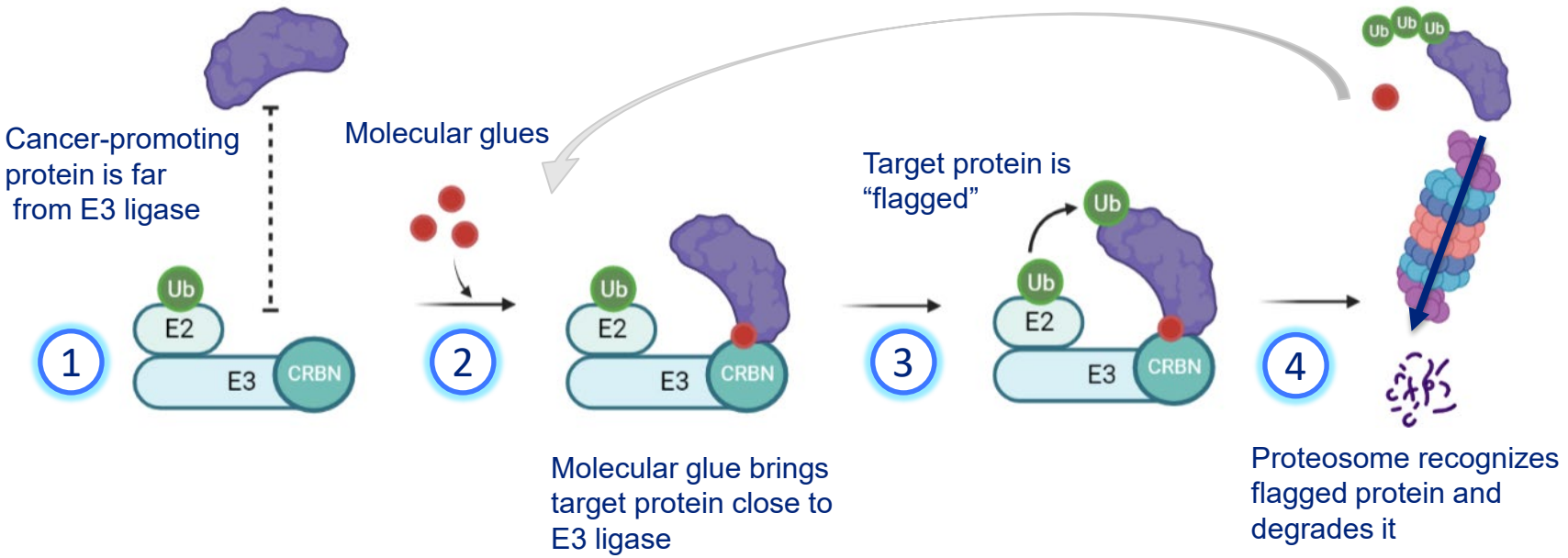
NOVARTIS: DUNAD therapeutics, ORIONIS™ BIOSCIENCES

…. and many others

[1] Roots Analysis, [2] Nature.com, [3] Cortellis.

Targeted Protein Degradation: A Long History with Recent Insights Driving Novel Drug Development

Targeted Protein Degradation (TPD) utilizes the **body's own** degradation system to **selectively eliminate** cancer-promoting proteins AND provide the ability to pursue historically **undruggable** cancer-promoting targets

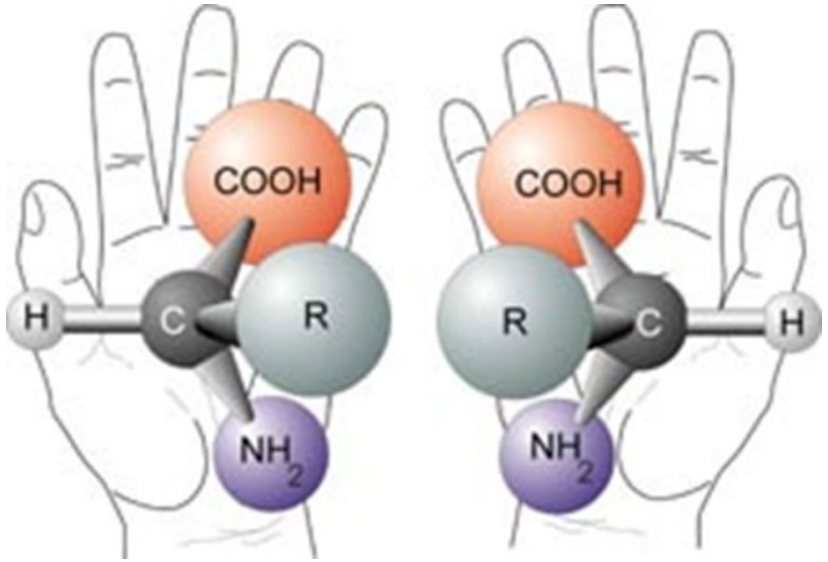


Advantages

- ✓ Low doses
- ✓ Undruggable targets
- ✓ Enzymatic/scaffolding inactivation

Chirality Occurs in Nature & Therapeutics

Left- or Right-Handedness Leads to Dramatic Differences



Hands & Chiral Compounds

non-superimposable mirror images (enantiomers)

Turpentine

***S**-Limonene*

Left-handed enantiomer

Orange Peel Oil

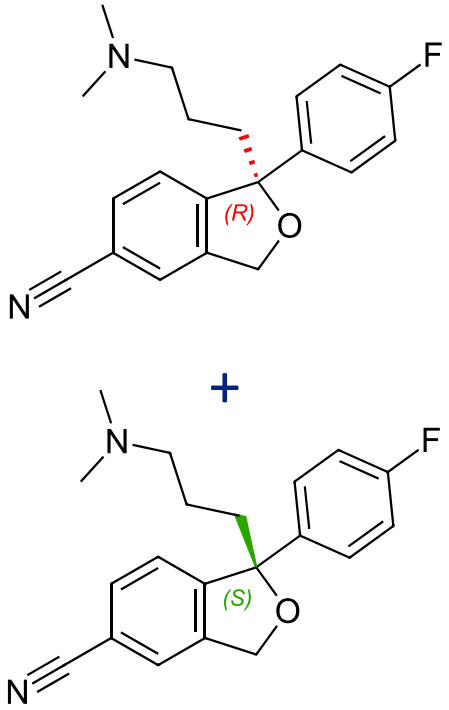
***R**-Limonene*

Right-handed enantiomer

Classic Chiral Switch Example: Celexa® ⇨ Lexapro®

Improved Drug Profile with the Single, Preferred Enantiomer

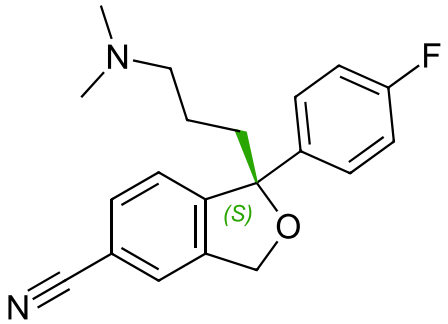
Applied since the 1990s for racemic drugs *with stable chiral centers*



CITALOPRAM
Racemate
Mixture of R & S enantiomers

Chiral Switch

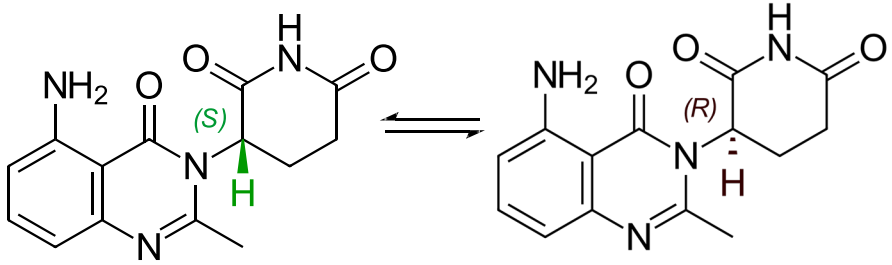
…from a mixture to the Best Drug!



ESCITALOPRAM
S-enantiomer
Better efficacy

SP-3164 was Developed From, and Improves Upon, a Clinically Validated Compound

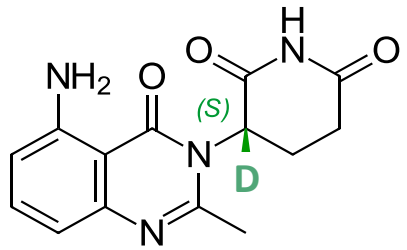
- SP-3164 was developed as a next-generation cereblon-binding version of a widely explored molecular glue, avadomide (Celgene, CC-122), that was studied in over 400 patients across 10 trials.
  - Avadomide (AVA) has an unstable chiral center and therefore exists as a racemic mixture: a 1-to-1 mixture of enantiomers (mirror images of one another). SP-3164 utilizes deuterium to lock the enantiomer in place and therefore exists as **only the active, S-enantiomer with minimal interconversion.**



S-avadomide

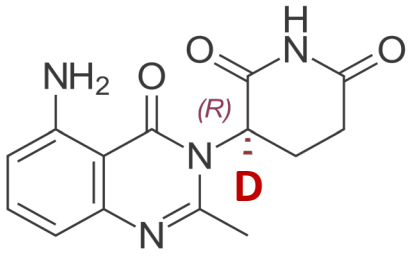
R-avadomide

Salarius Innovation



SP-3164
Deuterated S-avadomide

- ✓ Protein degradation
- ✓ Anticancer activity
- ✓ Immune stimulation
- ✓ COM Patent

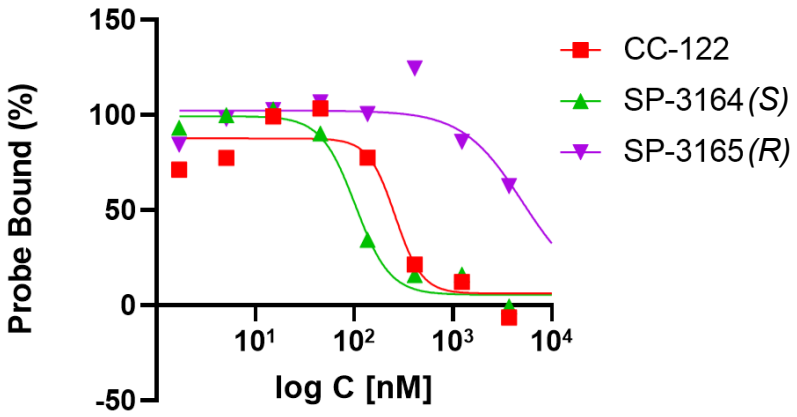


SP-3165
Deuterated R-avadomide

- No protein degradation or anticancer activity
- *Potentially* supports tumor growth

Increased Anticancer Activity in Animal Models

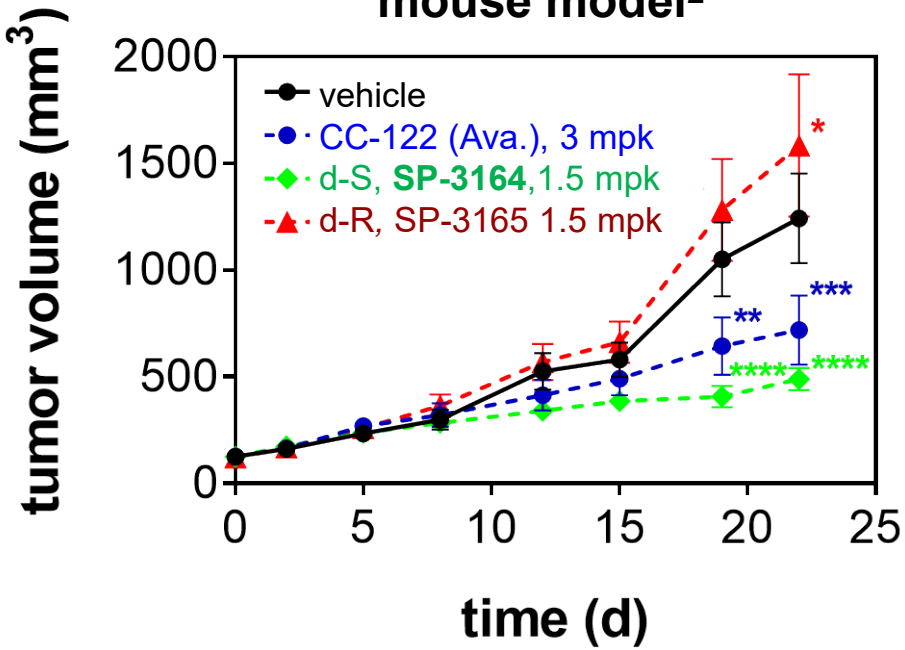
Cereblon Binding[1]



Compound	Kd (nM)
CC-122	330
SP-3164 (*S*)	110
SP-3165 (*R*)	14000

SP-3164 has improved efficacy in animal models of cancer

H929 multiple myeloma mouse model[2]



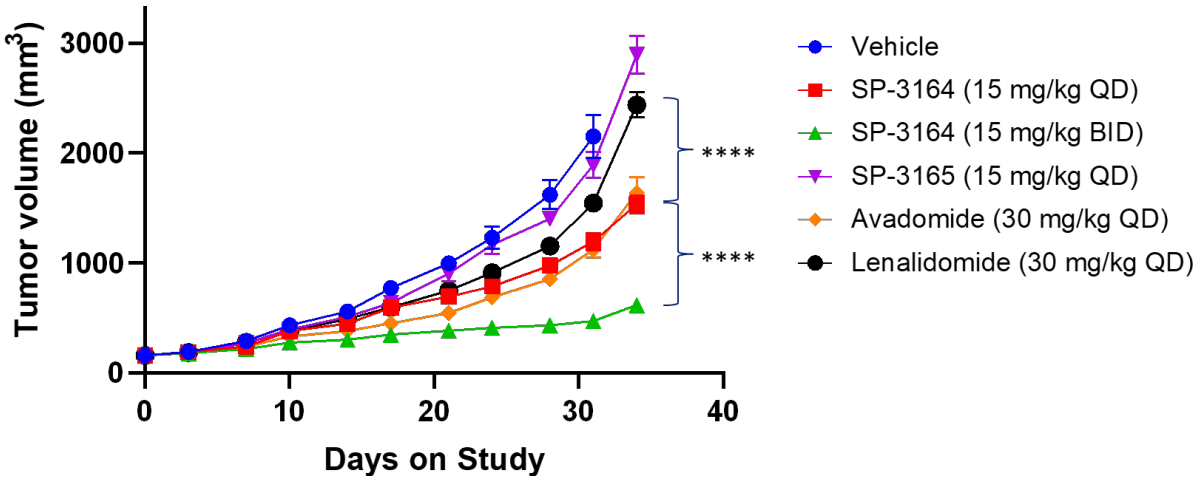
The improved properties of SP-3164 translate to increased efficacy compared with R-enantiomer or with avadomide (racemic mixture)

1. Data on file 2.Jacques, et al., Proc Natl Acad Sci. 2015, 112(12), E1471-9.

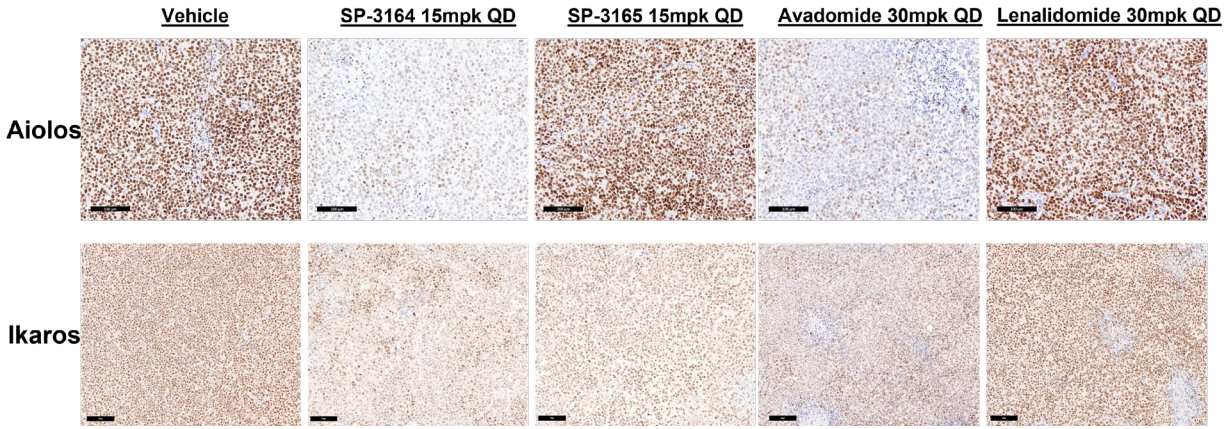
SP-3164 Demonstrates Single-Agent Activity in DLBCL And Superiority To Lenalidomide (Revlimid®)

Mouse DLBCL (WSU-DLCL2) Xenograft Model

Tumor Volume ±SEM



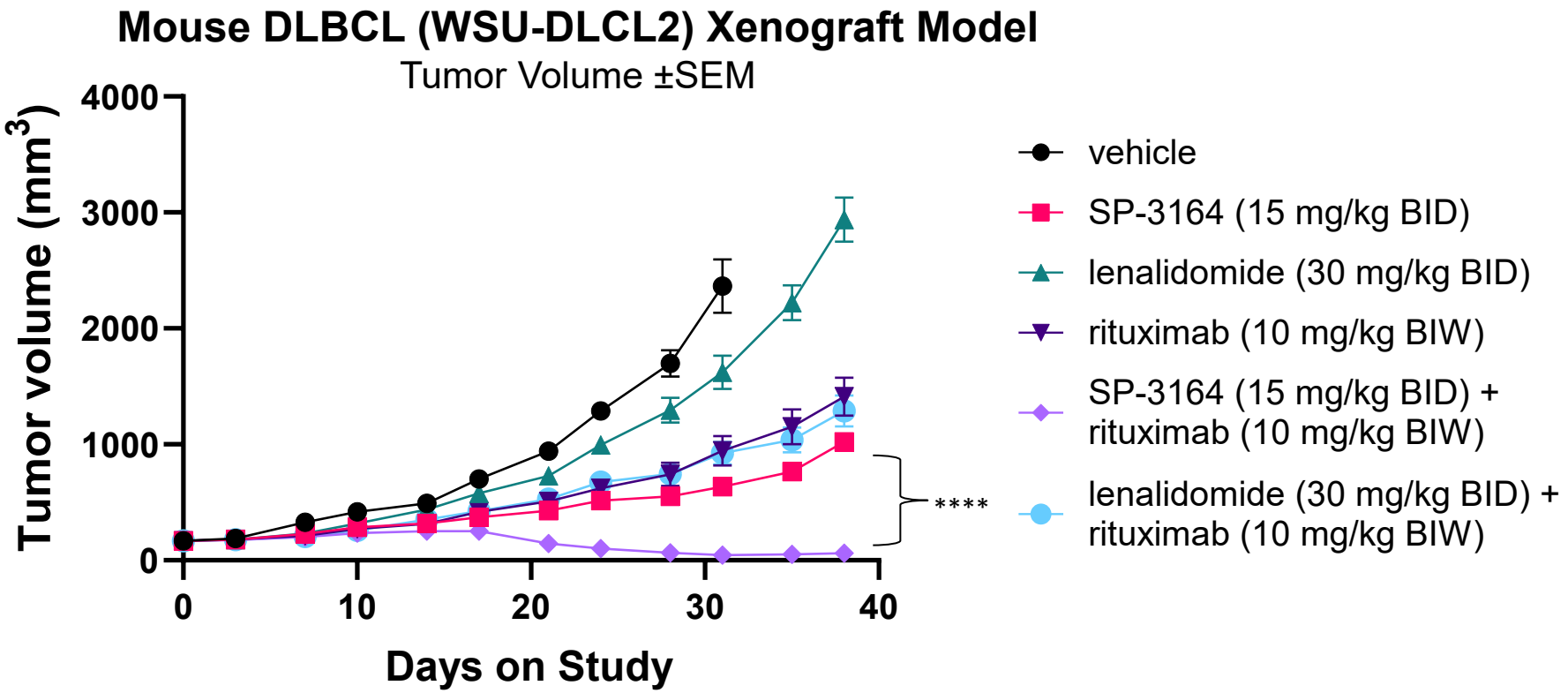
Degradation of Aiolos and Ikaros in tumors



- SP-3164 demonstrated pronounced antitumor activity as single agent outperforming lenalidomide and comparable to avadomide while SP-3165 lacked significant antitumor activity (**** p≤ 0.0001).
- Due to SP-3164's shorter $t_{1/2}$ vs. avadomide, SP-3164 was studied BID resulting in the largest inhibitory effect.
- Treatment with SP-3164 caused degradation of Aiolos and Ikaros in tumors (representative IHC images at t=6hr).

SP-3164, A Novel Cereblon-Binding Protein Degrader, Shows Activity in Preclinical Lymphoma Models, American Society of Hematology (ASH) Annual Meeting December 11-14, 2022

SP-3164 Shows Synergistic Activity with Rituximab in DLBCL And Superiority To Lenalidomide plus Rituximab



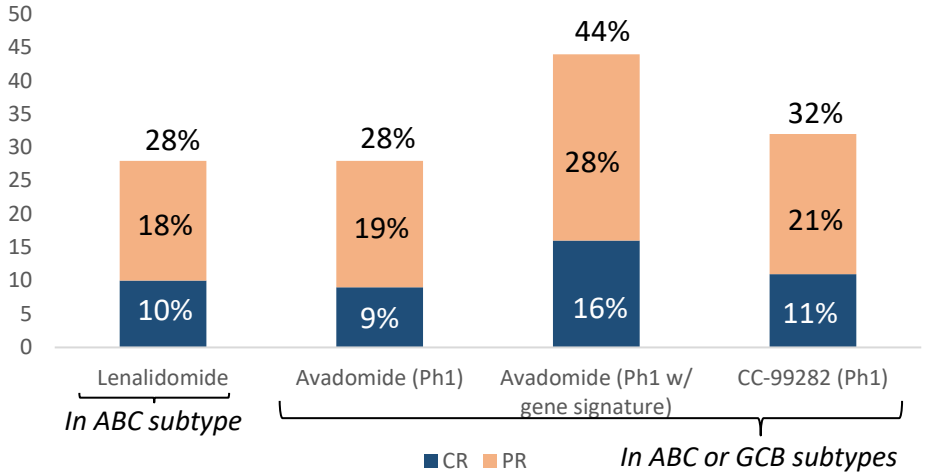
- SP-3164 combination with rituximab was compared to approved regimen, lenalidomide and rituximab in WSU-DLCL2 DLBCL model.
- Combination of SP-3164 and rituximab (4 weeks of treatment) resulted in sustained regressions with 50% of mice being tumor-free, significantly better than the lenalidomide and rituximab regimen (****p ≤0.001).

SP-3164, A Novel Cereblon-Binding Protein Degrader, Shows Activity in Preclinical Lymphoma Models, American Society of Hematology (ASH) Annual Meeting December 11-14, 2022

SP-3164 Is The Preferred (S) Avadomide Enantiomer

Compelling Avadomide Clinical Data Supports Sp-3164's Potential In DLBCL

Single agent activity in R/R DLBCL patients[1]



Avadomide performed just as well or better than lenalidomide as it also showed activity in the GCB subtype. Avadomide Phase 1 data is comparable to what CC-99282 is showing in the ongoing Phase 1. Use of the genetic signature increase response rates.

Combination activity in frontline DLBCL patients[2]

	1 mg 2/3 wk (n = 4)	2 mg 2/3 wk (n = 11)	3 mg 2/3 wk (n = 11)	3 mg 3/3 wk (n = 8)	Overall* (N = 34)
ORR, % (95% CI)	75 (19.4-99.4)	82 (48.2-97.7)	100 (71.5-100)	88 (47.3-99.7)	88 (72.5-96.7)
CRR, % (95% CI)	50 (6.8-93.2)	82 (48.2-97.7)	91 (58.7-99.8)	75 (34.9-96.8)	79 (62.1-91.3)
Complete metabolic response, n (%)	2 (50)	9 (82)	10 (91)	6 (75)	27 (79)
Partial metabolic response, n (%)	1 (25)	0	1 (9)	1 (13)	3 (9)
Progressive disease, n (%)	1 (25)	1 (9)	0	0	2 (6)
1-Year PFS rate, % (95% CI)	80 (13-96)	80 (45-95)	NR	NR	80 (58-92)
Median follow-up duration, mo† (range)	12.9 (11.5-14.1)	11.4 (1.1-15.9)	9.9 (1.1-11.7)	6.8 (2.1-7.9)	10.2 (7.9-11.7)

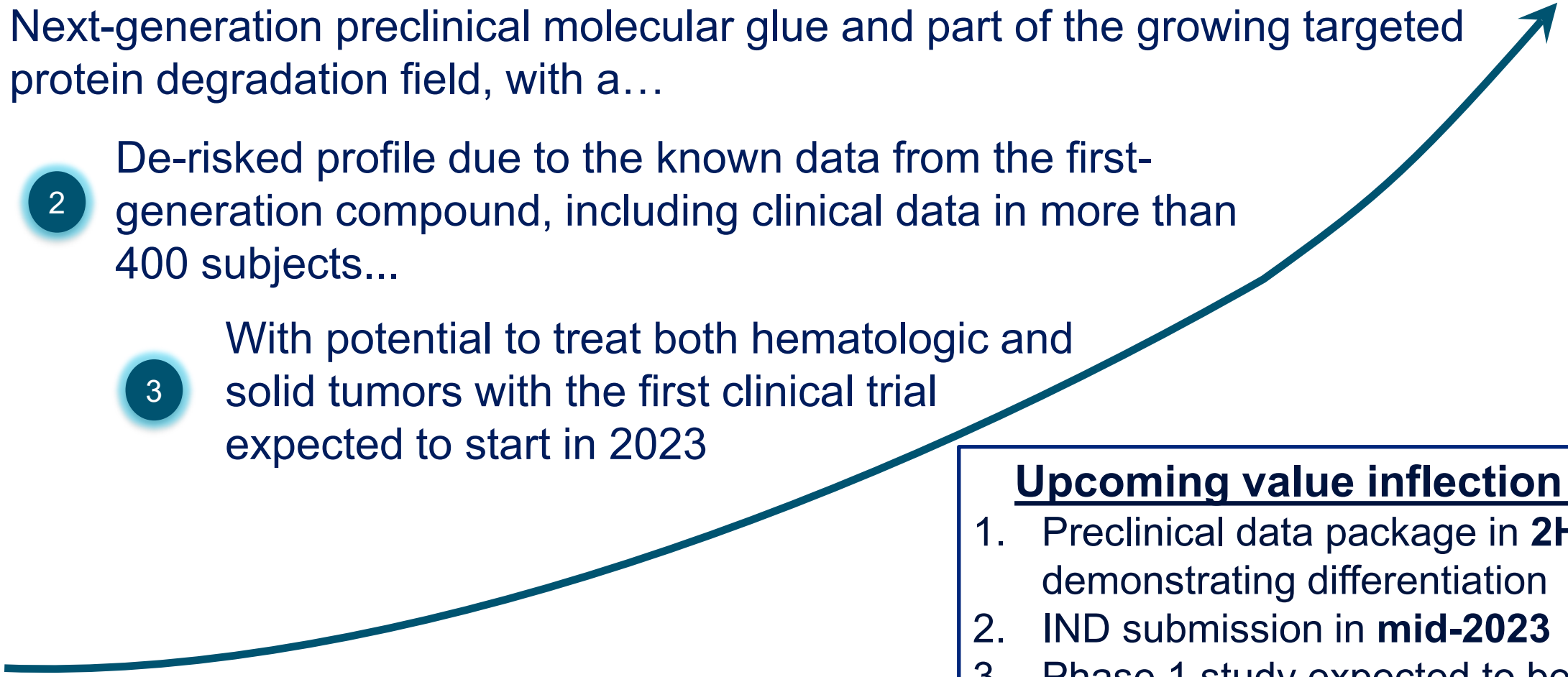
Avadomide showed compelling activity in combination with R-CHOP at various dose schedules. The most compelling dose schedule 3 mg (2/3 wk) resulted in a 100% ORR and 91% CR.

Performed better than lenalidomide +R-CHOP (ROBUST trial, ABC Subtype): ORR: 91% and CR 69%

1. Based on published/presented studies
2. Presented at ASCO 2020

SP-3164 Development Advantages & Value Inflection Points

1. Next-generation preclinical molecular glue and part of the growing targeted protein degradation field, with a…
2. De-risked profile due to the known data from the first-generation compound, including clinical data in more than 400 subjects...
3. With potential to treat both hematologic and solid tumors with the first clinical trial expected to start in 2023



Upcoming value inflection points

1. Preclinical data package in **2H 2022** demonstrating differentiation
2. IND submission in **mid-2023**
3. Phase 1 study expected to begin in **2H 2023**

Seclidemstat

A targeted reversible LSD1 inhibitor

Seclidemstat Reversibly Inhibits LSD1, A Validated Target

Seclidemstat is a Lysine Specific Demethylase 1 (LSD1) inhibitor that affects gene expression making it an attractive target for sarcomas and hematologic or blood cancers

LSD1 in Normal Cells and Cancer Cells[1]	
Normal Cells	• LSD1 is necessary for stem cell maintenance and cell development processes (e.g., blood cells)
Cancer Cells	• LSD1 is over-expressed • LSD1 acts incorrectly to silence or activate genes leading to disease progression • Validated target: LSD1 CRISPR deletion oftentimes detrimental to cancer cells

Seclidemstat *reversibly* inhibits **LSD1**

- Reverses incorrect gene expression, killing or preventing the growth of cancer cells
- Inhibits both the enzymatic and the scaffolding activity

Companies with clinical LSD1 inhibitors:

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Celgene

Bristol-Myers Squibb

ORYZON

IMAGO

JUBILANT THERAPEUTICS

[1]Majello,B. *Cancers* 2019. [2]Appendix B

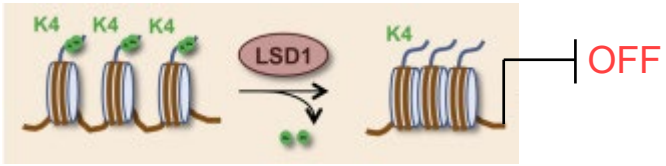
LSD1 Inhibitors Positively Impact Therapeutic Activity; Seclidemstat Demonstrates Broader Scaffolding Inhibition

Degree of LSD1 inhibition

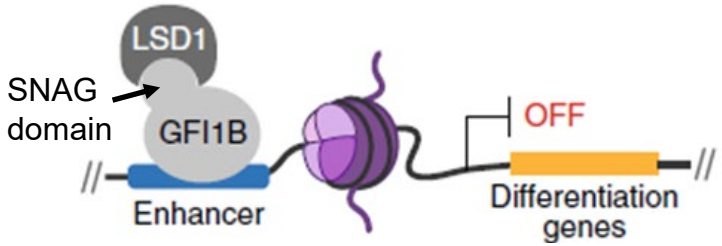
Enzymatic activity – demethylation
Impact: Moderately alter gene expression

Partial scaffolding* inhibition of LSD1 – protein interaction
Impact: Alter gene expression in cancers (AML, SCLC)

Broader scaffolding inhibition of LSD1 – protein interaction
Impact: Potential efficacy in broader range of cancer types, destabilize LSD1 and complexes



Salarius PHARMACEUTICALS and competitors



Salarius PHARMACEUTICALS and competitors

Salarius PHARMACEUTICALS

- ✓ Differential activity
- ✓ Reduces LSD1 expression
- ✓ Reversibility – Potential for Favorable toxicology profile

*scaffolding properties – protein to protein interactions

Seclidemstat Sarcoma Program

Phase 1/2 in Ewing's sarcoma

Ewing's Sarcoma: Unmet Need, Meaningful Opportunity

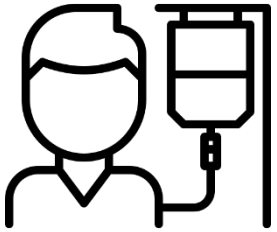
Diagnosis

~500 US patients diagnosed each year with a median age of 15 at the time of diagnosis

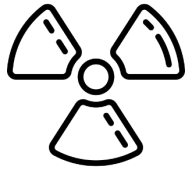
- 75% localized[1]
- 25% with metastasis[1]

Standard-of-Care

Surgery and Amputations



Chemo



Radiation

- ~40% of patients are refractory or relapse[2]
- 70-90% 5-year mortality rate[2]
- No standardized second-line treatment

Salarius' Vision

An effective, non-toxic, oral treatment

- Accelerated U.S. approval
- Rapid market uptake
- $200M+ global sales[3] (est.)
- Possible PRV worth $80M-$150M

- ✓ Fast track designation
- ✓ Orphan drug designation
- ✓ Rare pediatric drug designation

[3] Represents longer term vision and does not represent estimate of future performance, financial or otherwise. There is no assurance that we will achieve our longer-term vision.

[1] Pishas, K. et al. (2016)

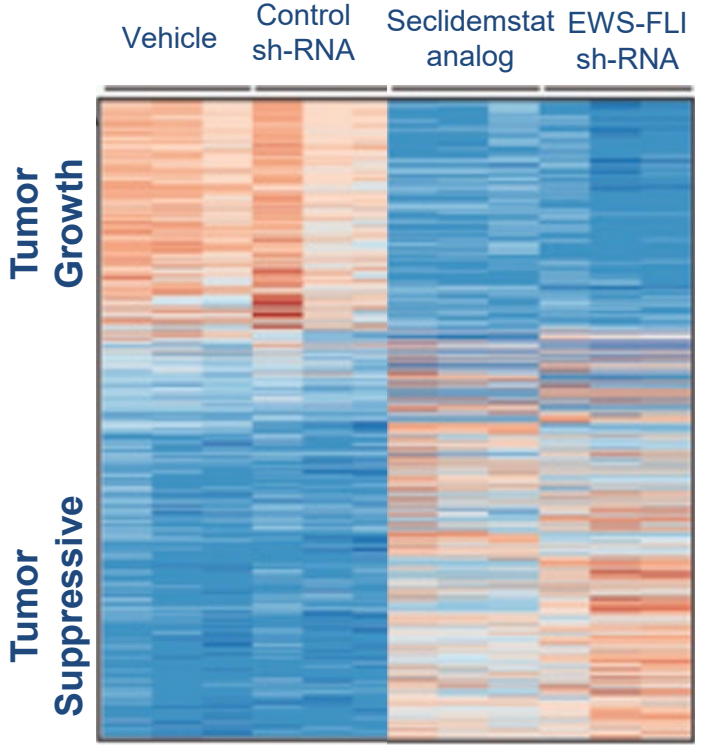
[2] Van Mater, et al. Oncotargets (2019)

Seclidemstat Targets the Root Cause of Ewing's Sarcoma

Ewing's sarcoma is driven by dysregulation of gene expression

Seclidemstat corrects gene expression

Ewing's cells (A673)



Red = turned ON

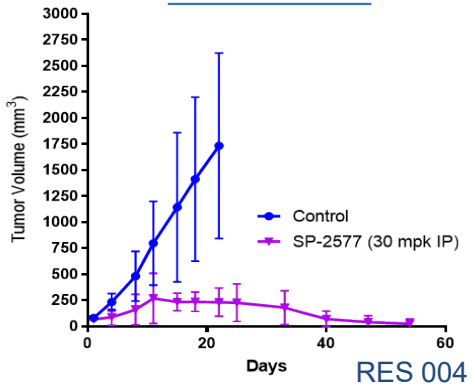
Blue = turned OFF

Genes correctly turned on/off

Reversing incorrect gene expression leads to tumor reduction in animal models

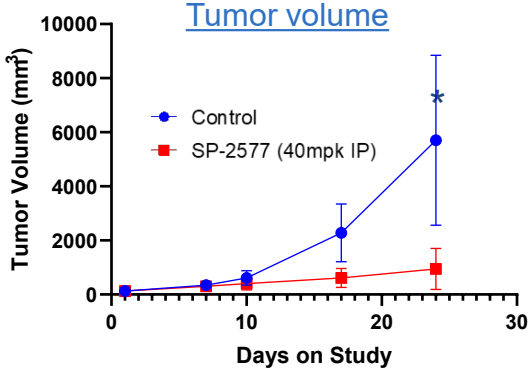
Potent antitumor activity in SKNMC (Ewing's sarcoma cells) *in vivo* studies

Tumor volume



RES 004 Salarius

Tumor volume



*p<0.0003

RES 006 Salarius

Second Line Ewing Sarcoma Patients (1st Relapse Patients) Had 7.4 Months Median Time To Tumor Progression (data on file)

Patients with Disease Control Had No Observed Disease Progression
Interim Results of Salarius Sponsored Trial for Treatment Ewing Sarcoma (as 10/31/2022)

	CRc[1]	PRc[1]	ORR	SDc[1]	DCRc	PD	mTTP Months	Range Months
1st Relapse Pts (5)	1	1	2 (40%)	1	3 (60%)	2	7.4	1.4 to 13.8
2nd Relapse Pts (8)		1	1 (13%)	1	2 (25%)	6	1.5	0.7 to 5.1
1st and 2nd Relapse Pts (13)	1	2	3 (23%)	2	5 (38%)	8	1.6	0.7 to 13.8
1st and 2nd Relapse Pts w/ DCRc (5)					5 (38%)		7.4	3.1 to 13.8 No Observed PD[2]
rEECur (primarily a 1st relapse Ewing sarcoma data set[3]) Salarius (Second Line or 1st Relapse Patients)							3.5 mPFS 7.4 mTTP	95% CI 2.5 to 5.1

[1] Patient status confirmed (c) by both C2 and C4 scans. [2] Among 5 patients with DCRc while on study: 1 pt withdrew (WD) at 3.1 months with 32% PRc; 1 pt WD at 5.1 months with 11% reduction SDc due to a nondrug unrelated SAE; 1 patient WD at 7.4 months with CRc; 1 patient WD at 12.8 months with 80% PRc (elected RT consolidation treatment); 1 patient at 13.8 months continues treatment with SDc. [3] ~80% Primary Refractory or 1st Relapse Patients and ~20% 2nd Relapse Patients.

Abbreviations CR complete response; PR partial response; SD stable disease; DCR disease control Rate (CR, PR, SD); TTT Time to Tumor Progression; PFS Progression Free Survival

Sarcoma Phase 1/2 Clinical Trial Sites Are A Who's Who Of Cancer Research

Ewing's Sarcoma & FET-Rearranged Sarcomas

Open-label, dose-expansion trial design

- **Arm 1**: Up to 30 Ewing's sarcoma patients treated in combination with topotecan/cyclophosphamide
- **Arm 2**: Up to 30 FET-rearranged sarcoma patients (including up to 15 myxoid liposarcoma patients) treated with single-agent seclidemstat

  Primary objective: Safety, tolerability

  Secondary objectives: Antitumor assessment

  Exploratory: cfDNA, CTCs, hemoglobin F, target engagement

- Currently on Partial Clinical Hold

CURRENTLY ENROLLING AT

16 CLINICAL SITES

- Manageable safety profile, pharmacokinetics support BID dose schedule
- Signs of antitumor activity in patients at or below the RP2D in Ewing's and FET sarcomas

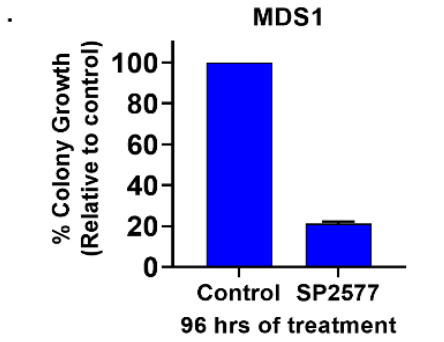
Seclidemstat Additional Indications

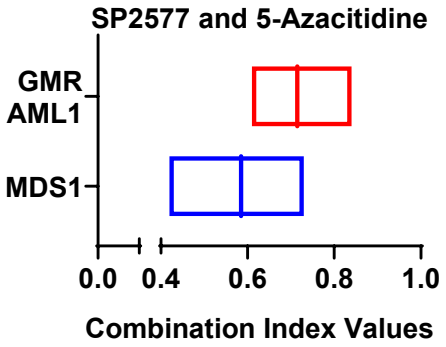
Hematologic malignancies and immunotherapy

Seclidemstat + Azacitidine Shows Activity In Cell Lines And MDACC Is Now Treating Patients With Hematologic Or Blood Cancers

Hematologic Cancers[1]

Seclidemstat inhibits MDS cell growth and shows synergy with azacitidine





Phase 1/2 investigator-initiated study enrolling patients at MD Anderson Cancer Center in myelodysplastic syndromes & chronic myelomonocytic leukemia

Clinicaltrials.gov Identifier: NCT04734990

Clinical data updates anticipated in 2H 2022

Patient enrollment is currently paused

Primary Objectives

- Safety, tolerability and maximum tolerated dose
- Overall response rate

Secondary Objectives

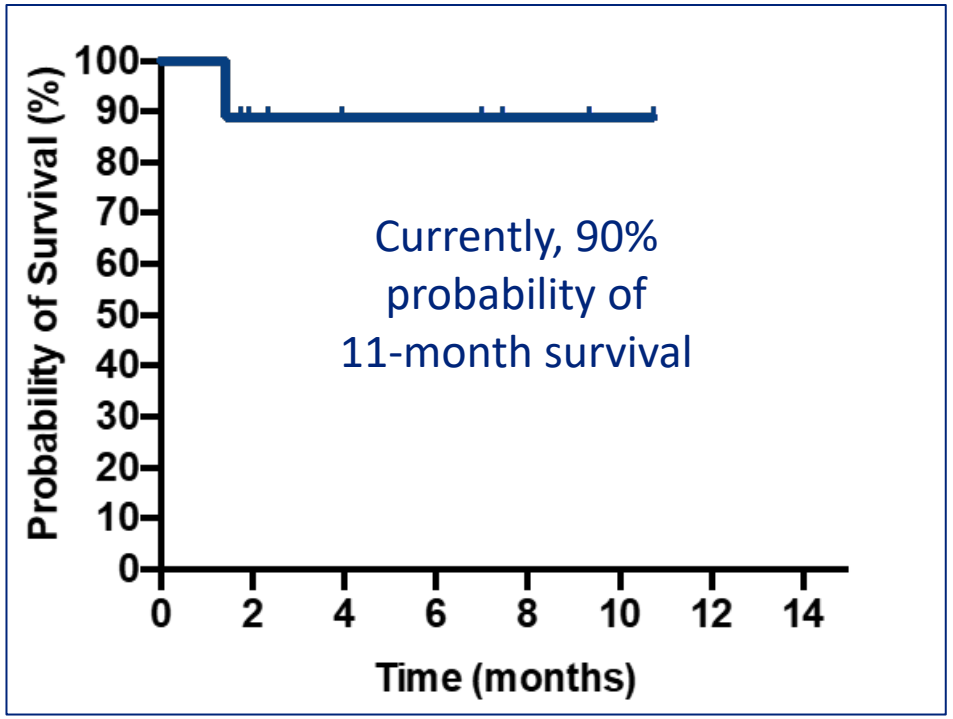
- Overall survival, duration of response, relapse-free survival, leukemia-free survival and safety
- Correlative studies including correlation of response with disease subtypes, genomic profile and *in vitro* studies

1. Seclidemstat + azacitidine trial is open for enrollment

The Combination of Seclidemstat with Azacitidine Shows Initial Signs of Potential Activity Treatment of MDS and CMML

ASH Poster Presentation Results from the Ongoing Investigator Sponsored MD Anderson Trial for Treatment of MDS and CMML[1] with prior HMA[2] treatment

Dose	Outcome
150 mg BID	PD
150 mg BID	No Response
150 mg BID	mCR with SCT
300 mg BID	mCR
300 mg BID	mCR + HI + PI
300 mg BID	NR
450 mg BID	mCR + HI
450 mg BID	SD
450 mg BID	Too early for response



- 50% ORR (4/8) including curative transplant
- Patient Disposition:
  - 3 patients on study
  - 1 to undergo allo-SCT
  - 3 off due to no response
  - 2 patients off study due to progression
- Note: Overall Survival in HMA failure patients is 4-6 months

1 Patients previously failed azacitidine or decitabine. SCT: stem cell transplant, CMML: chronic myelomonocytic leukemia, MDS: myelodysplastic syndrome, T-MDS: therapy related MDS, mCR: marrow complete response, pCyR: partial cytogenetic response, SD: stable disease, PD: progressive disease, BM: bone marrow; HI: Hematologic Improvement; PI: Platelet improvement

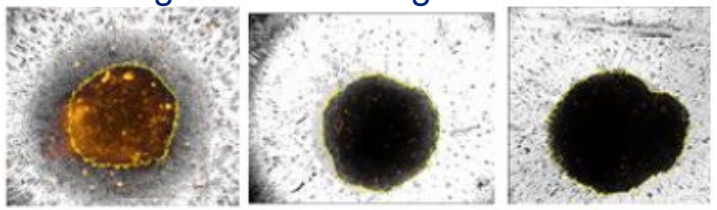
[2] HMA Hypomethylating Agent (azacytidine, decitabine)

A Phase I/II Study of Seclidemstat, an LSD1 Inhibitor, and Azacitidine for Patients with Myelodysplastic Syndromes and Chronic Myelomonocytic Leukemia, American Society of Hematology Annual Meeting December 11-14, 2022

Seclidemstat Analog Causes Increase In Immune Cell Infiltration In Organoids – Unmasks Hidden Tumors (turns cold tumors hot)

- Checkpoint inhibitors (CPIs) only work in 15%-60% of patients[1]
- 7 FDA approved CPIs generated 2021 global sales of ~$19.9 Billion with estimated annual growth of ~20%[2]
- Turning a cold tumor hot unmasks the hidden tumor allowing CPIs to attack the cancer
- A 1%-point increase in 2021 COI market share was worth $200M in annual sales

Seclidemstat [3] Analog | Inactive Analog | DMSO



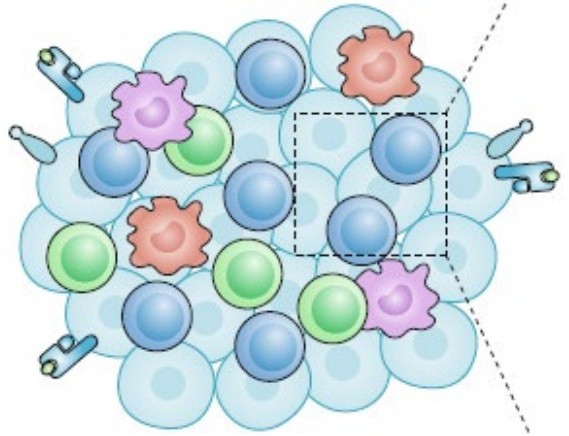
HOT tumor: responsive to checkpoint inhibitor

COLD tumor: not responsive to checkpoint inhibitor

Orange/gold indicates anticancer immune cells are infiltrating tumor

Planned Clinical Trial to Demonstrate Increased Response to Checkpoint Inhibitors

Seclidemstat could turn **cold** tumors into **hot** tumors…



…and may help increase patient response to IO therapies

Topper, M.J., et al. *Nature Reviews* (2019)

1 *(https://jitc.bmj.com/content/7/1/306)*
2 *(https://www.thebusinessresearchcompany.com/report/checkpoint-inhibitor-global-market-report)*
3 Soldi, R. et a. AACR 2019

Market Opportunity

SPEED-TO-MARKET

Sarcomas (Ewing's and FET-rearranged)
500-2,000 patients diagnosed/year

Potential for accelerated approval, priority review

$80M-$150M

Pediatric priority review voucher (est.)

$400M+

Global sales per year (est)[1]

EXPANDING INTO **LARGER MARKETS**

PROOF-OF-CONCEPT IN **HEMATOLOGIC CANCERS**

Trial in MDS/CML initiated at MD Anderson Cancer Center

$1B+ Market Potential[2]

POTENTIAL TO ENTER INTO **IMMUNOTHERAPY**

Sensitizing resistant cancers to checkpoint inhibitors

$1B+ Market Potential[3]

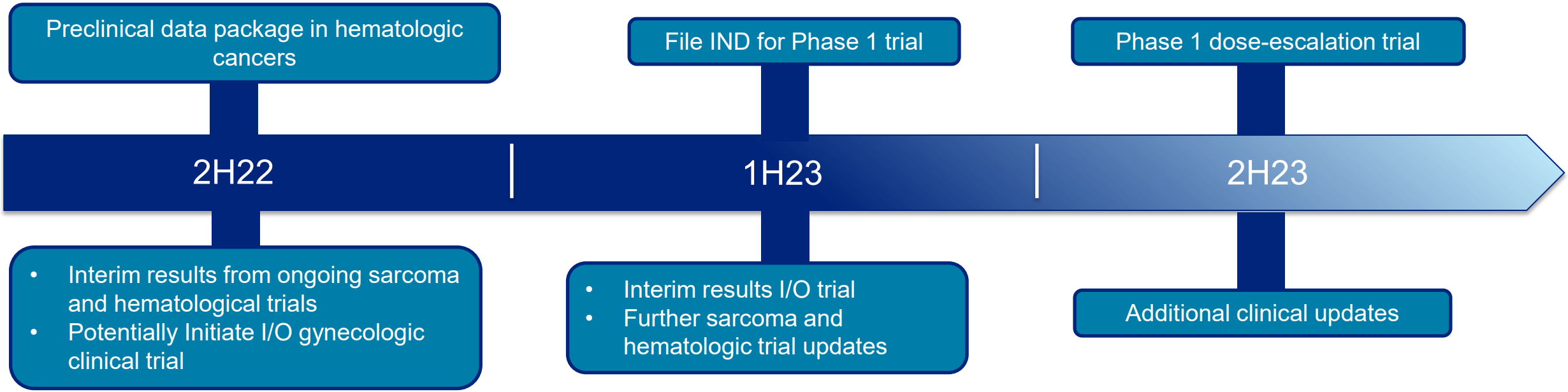
Citations in Appendix A

Value-Creating Near-Term Milestones

Protein Degradation

SP-3164 is a next-generation MG based on a drug studied in >400 subjects that showed compelling efficacy and safety

- Next-generation MGs are building upon an established $16.1B first-generation market



Protein Inhibition

Seclidemstat in Phase 1/2 clinical trials for sarcomas and hematological cancers (presently on partial clinical hold)

- Speed-to-market in rare sarcomas ($400M opportunity) + market expansion into larger markets ($1B+ opportunities)

Seasoned Leadership Team

David J. Arthur
Chief Executive Officer

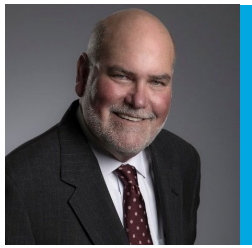
Lilly · Boehringer Ingelheim

Nadeem Q. Mirza, MD, MPH
Senior VP Clinical Development

SANOFI · abbvie

Stephen Horrigan, PhD
Consulting Chief Scientific Officer

Iterion · NOBLE LIFE SCIENCES



Mark Rosenblum
Chief Financial Officer

ADVAXIS · WELLMAN, INC. · Deloitte.

Rebecca Griffith-Eskew
VP Clinical Operations

WORLDWIDE CLINICAL TRIALS · Boehringer Ingelheim

Daniela Y. Santiesteban, PhD
Director Protein Degradation Development

GRFP · Georgia Tech

Board of Directors

David Arthur, MBA	**Jonathan Lieber, MBA**	**Tess Burleson, CPA**	**Paul Lammers, MD MSc**	**Bruce McCreedy, PhD**	**William McVicar, PhD**	**Arnold Hanish, CPA**
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	AGT Corporation		Merck Serono	Precision BioSciences	Sepracor	Eli Lilly
	Histogenics				Novartis	

Investment Highlights

Two compounds, each with numerous avenues to create shareholder value	• SP-3164: next generation protein degrader expected to enter the clinic in 2023 • Seclidemstat (SP-2577): a clinical stage reversible LSD1 protein inhibitor
Multiple near-term milestones to catalyze awareness and build value	• SP-3164: Preclinical data in 2022, IND filing in 1H23 for hematologic or blood cancers and/or solid tumors • Seclidemstat: interim clinical data, resolve partial clinical hold
Pipeline features new indications in large market opportunities	• Protein degradation builds on a 2021 $16 billion global opportunity • Protein inhibition immunotherapy combination and blood cancers represent compelling market opportunities
Management team and advisors experienced in bringing drugs to market	• Track record at large pharma and development-stage companies • Includes Eli Lilly, Sanofi, Boehringer Ingelheim, GSK and AbbVie
Cash/equivalents of $16.8 million as of September 30, 2022	• Funds operations through near-term milestones • No debt, clean cap structure

Appendix

Appendix A: Additional Sources

- Combination of Possibilities Presents Significant Market Opportunity for Seclidemstat

[1] Represents longer term vision and does not represent estimate of future performance, financial or otherwise. There is no assurance that we will achieve our longer term vision.

[2] Hematological Malignancies. Apr 2020. Brand Essence Market Research.

[3] https://www.forbes.com/sites/greatspeculations/2019/03/12/how-much-can-mercks-share-price-grow-if-keytruda-gets-10-share-of-oncology-drug-market/#77edba677e18

[4] Cancer of the Ovary – Cancer Stat Facts, The National Cancer Institute: Surveillance, Epidemiology and End Results Program https://seer.cancer.gov/statfacts/html/ovary.html.

[5] GlobalData: Prostate Cancer: Global Drug Forecast and Market Analysis to 2028

[6] GlobalData and Epidemiology Market Size Database, TNBC

[7] GlobalData: Opportunity Analyzer: Ovarian Cancer - Opportunity Analysis and Forecast to 2025

[8] Morel, D., et al. Ann of Oncology 2017

Avadomide (CC-122) was Studied in Several Clinical Trials and Demonstrated Compelling Efficacy and Safety

NCT number	Indications	N	Treatment	Results
NCT01421524[1]	MM, DLBCL – at least 1 prior therapy, GBM, PCNSL, R/R HCC	271	avadomide	Completed **DLBCL, 97 pts (one of the expansion cohorts)** **ORR: 28%; CR: 9%** **with gene signature** **ORR: 44%; CR: 16%**
NCT03283202[2]	newly diagnosed DLBCL	35	avadomide + R-CHOP	Completed All cohorts: 88% ORR; 79% CR 3 mg 2/3 wk: ORR 100%; CR 91%
NCT02417285[3]	DLBCL – at least 2 prior therapies, iNHL – at least 1 prior therapy R/R FL (expansion)	75	avadomide + obinutuzumab	Not recruiting R/R FL 53 pts; DLBCL 19 pts; MCL 1 pt 66% ORR (FL only: 72%) 29% CR (FL only: 40%)
NCT02406742[4]	CLL/SLL – at least 1 prior therapy; dose escalation	47	avadomide (A), avadomide + ibrutinib (B), avadomide + obinutuzumab (C)	Completed A. 7% ORR B. 88% ORR C. 63% ORR
NCT02031419[5]	DLBCL – chemo refractory, FL – at least 1 prior therapy	174	avadomide + CC-223 +/- rituximab	Not recruiting **DLBCL + rituximab 39% ORR, 16% CR (n=19)** **with gene signature: 50% ORR, 50% CR**
NCT03310619[6]	NHL, DLBCL, FL	~ 3	avadomide + JCAR017 (CAR-T-Cell therapy)	N/A
NCT02859324[7]	HCC – up to 2 prior therapies	21	avadomide + nivolumab	2 mg: 43% ORR, 72% DCR, PFS 4.3 mo 3 mg: 0% ORR, 44% DCR, 3.2 mo 4 mg: 0% ORR, 80% DCR, 4.1 mo
NCT02323906[8]	HCC – no prior therapy	12	avadomide + sorafenib	Terminated N/A
NCT03834623[9]	Melanoma – CPI naïve or CPI progressed	23	avadomide + nivolumab	N/A

MM – multiple myeloma; DLBCL – diffuse large B-cell lymphoma; GBM – glioblastoma multiforme; PCNSL – primary central nervous system lymphoma; HCC – hepatocellular carcinoma; iNHL – indolent non-Hodgkin's lymphoma; FL – follicular lymphoma; CLL/SLL – chronic lymphocytic leukemia / small lymphocytic lymphoma; MCL – mantle cell lymphoma; R/R – relapsed or refractory; CPI – checkpoint inhibitor; R-CHOP – rituximab, cyclophosphamide, doxorubicin, vincristine, prednisone; ORR – overall response rate; CR – complete response; DCR – disease control rate; PFS – progression-free survival; pt – patient. Table reflects Salarius's best efforts at capturing published data.