UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
Washington, D.C. 20549

FORM 8-K

CURRENT REPORT
Pursuant to Section 13 OR 15(d) of the Securities Exchange Act of 1934

Date of Report (Date of earliest event reported): May 25, 2021

PIERIS PHARMACEUTICALS, INC.
(Exact name of registrant as specified in its charter)

Nevada	001-37471	30-0784346
(State or other jurisdiction of Incorporation)	(Commission File Number)	(IRS Employer Identification No.)

225 State Street, 9th Floor Boston, MA	02109
(Address of principal executive offices)	(Zip Code)

Registrant's telephone number, including area code: 857-246-8998
N/A
(Former name or former address, if changed since last report.)

Check the appropriate box below if the Form 8-K filing is intended to simultaneously satisfy the filing obligation of the registrant under any of the following provisions:

☐ Written communications pursuant to Rule 425 under the Securities Act (17 CFR 230.425)

☐ Soliciting material pursuant to Rule 14a-12 under the Exchange Act (17 CFR 240.14a-12)

☐ Pre-commencement communications pursuant to Rule 14d-2(b) under the Exchange Act (17 CFR 240.14d-2(b))

☐ Pre-commencement communications pursuant to Rule 13e-4(c) under the Exchange Act (17 CFR 240.13e-4(c))

Securities registered pursuant to Section 12(b) of the Act:

Title of each class	Trading Symbol(s)	Name of each exchange on which registered
Common Stock, $0.001 par value per share	PIRS	The Nasdaq Capital Market

Indicate by check mark whether the registrant is an emerging growth company as defined in Rule 405 of the Securities Act of 1933 (17 CFR §230.405) or Rule 12b-2 of the Securities Exchange Act of 1934 (17 CFR §240.12b-2).

Emerging Growth Company ☐

If an emerging growth company, indicate by check mark if the registrant has elected not to use the extended transition period for complying with any new or revised financial accounting standards provided pursuant to Section 13(a) of the Exchange Act. ☐

Item 7.01 Regulation FD Disclosure.

Attached hereto as Exhibit 99.2 and incorporated by reference herein is the May 2021 Investor Presentation of Pieris Pharmaceuticals, Inc.

The information set forth under this "Item 7.01. Regulation FD Disclosure," including Exhibit 99.1 attached hereto, shall not be deemed "filed" for any purpose, and shall not be deemed incorporated by reference into any filing under the Securities Act of 1933, as amended, or the Securities Exchange Act of 1934, as amended, regardless of any general incorporation language in any such filing. except as shall be expressly set forth by specific reference in such filing.

Item 9.01 Financial Statements and Exhibits

(d) *Exhibits.*

99.1 Investor Presentation, Dated May 2021.

SIGNATURE

Pursuant to the requirements of the Securities Exchange Act of 1934, the registrant has duly caused this report to be signed on its behalf by the undersigned hereunto duly authorized.

PIERIS PHARMACEUTICALS, INC.

Dated: May 25, 2020

/s/ Tom Bures

Tom Bures

Vice President, Finance

PIERIS PHARMACEUTICALS

CORPORATE PRESENTATION
MAY 2021

Forward-Looking Statements

This presentation contains forward-looking statements as that term is defined in Section 27A of the Securities Act of 1933 and Section 21E of the Securities Exchange Act of 1934. Statements in this presentation that are not purely historical are forward-looking statements. Such forward-looking statements include, among other things, whether data from patients enrolled to date will be sufficient to inform the recommended phase 2 dose for the Company's planned proof of concept study of cinrebafusp alfa in gastric cancer; the expected timing and potential outcomes of the reporting by the Company of key clinical data from its programs, references to novel technologies and methods and our business and product development plans, including the advancement of our proprietary and co-development programs into and through the clinic and the expected timing for reporting data, making IND filings or achieving other milestones related to our programs, including PRS-060/AZD1402, cinrebafusp alfa, PRS-344, and PRS-352 and the expected timing of the initiation of the next stage of cinrebafusp alfa's development in gastric cancer. Actual results could differ from those projected in any forward-looking statements due to numerous factors. Such factors include, among others, our ability to raise the additional funding we will need to continue to pursue our business and product development plans; the inherent uncertainties associated with developing new products or technologies and operating as a development stage company; our ability to develop, complete clinical trials for, obtain approvals for and commercialize any of our product candidates, including our ability to recruit and enroll patients in our studies; competition in the industry in which we operate; delays or disruptions due to COVID-19; and market conditions. These forward-looking statements are made as of the date of this presentation, and we assume no obligation to update the forward-looking statements, or to update the reasons why actual results could differ from those projected in the forward-looking statements, except as required by law. Investors should consult all of the information set forth herein and should also refer to the risk factor disclosure set forth in the reports and other documents we file with the SEC available at www.sec.gov, including without limitation the Company's Annual Report on Form 10-K for the fiscal year ended December 31, 2020 and the Company's Quarterly Reports on Form 10-Q.

Executive Summary

Superior Medicines via Efficient Biology

- Protein therapeutics that exploit biology validated by mAbs; engineered for focused activity at disease locus
- Improved activity, reduced side effects, increased convenience

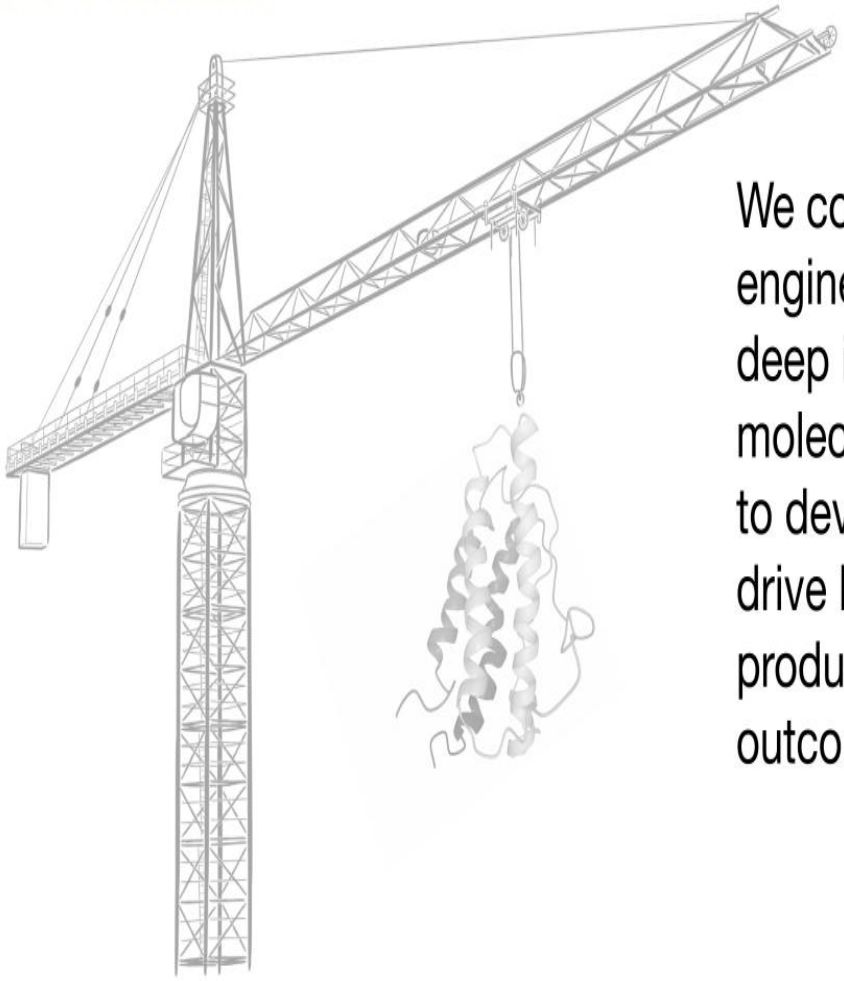
Two Focus Areas

- Oral inhaled antagonists for respiratory disease
- Locally activated immuno-oncology bispecifics
- 2 POC readouts in '22; several follow-on candidates

Supportive Partnerships

- ~$200M since 2017 in upfronts, milestones and equity investments
- Several co-developed and out-licensed programs
- Clinical supply for combination studies and development expertise

Our Platform



We combine leading protein engineering capabilities and deep insights into molecular drivers of disease to develop medicines that drive local biology to produce superior clinical outcomes for patients

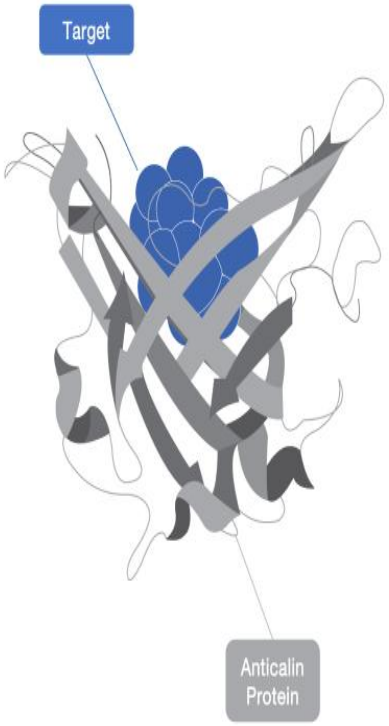
Anticalin® Proteins as Therapeutic Modalities

A Novel Therapeutic Class with Favorable Drug-Like Properties

- **Human** – Derived from lipocalins (human extracellular binding proteins)
- **Small** – Monomeric, monovalent, small size (~18 kDa vs ~150kDa mAbs)
- **Stable** – Inhalable delivery
- **Simple** – Bi/multispecific constructs
- **Proprietary** – Broad IP position on platform and derived products

Translational Science Expertise to Deploy Platform in Meaningful Way

- Immunology expertise underpins IO and respiratory focus
- A leader in 4-1BB and costim biology
- Patient phenotyping efforts for improved stratification and novel intervention points in, e.g., asthma



Our Pipeline

RESPIRATORY								
CANDIDATE	TARGETS	INDICATION	PARTNER	OUR COMMERCIAL RIGHTS	DISCOVERY	PRECLINICAL	PHASE I	PHASE II
PRS-060/AZD1402	IL4-Rα	Asthma	AstraZeneca	Worldwide Profit-Share Option				
Proprietary Programs	n.d.	n.d.	n/a	Worldwide				
AstraZeneca Programs*	n.d.	n.d.	AstraZeneca	Worldwide Profit-Share Options				
Genentech Programs+	n.d.	n.d.	Genentech	Royalties				
*4 respiratory programs in collaboration with AstraZeneca, 2 of which carry co-development and co-commercialization options for Pieris								
+Collaboration includes 1 respiratory program and 1 ophthalmology program								

IMMUNO-ONCOLOGY								
CANDIDATE	TARGETS	INDICATION	PARTNER	OUR COMMERCIAL RIGHTS	DISCOVERY	PRECLINICAL	PHASE I	PHASE II
Cinrebafusp Alfa (PRS-343)	4-1BB/HER2	HER2-High GC**	n/a	Worldwide				
		HER2-Low GC**						
PRS-344/S095012	4-1BB/PD-L1	n.d.	Servier	US Rights; ex-US Royalties				
PRS-352	n.d.	n.d.	Servier	Royalties				
PRS-342/BOS-342	4-1BB/GPC3	n.d.	Boston Pharmaceuticals	Royalties				
Seagen Programs‡	Co-stim Agonist	n.d.	Seagen	US Co-Promotion Option; Royalties				
‡3 bispecific programs in collaboration with Seattle Genetics, with Pieris retaining a US co-promotion option for the second program								
** Phase 2 study includes HER2-high arm in combination with ramucirumab and paclitaxel and HER2-low arm in combination with tucatinib; drug supply agreements with Lilly and Seagen, respectively								

Collaboration Snapshot

AstraZeneca

- PRS-060/AZD1402 + 4 additional programs
- Upfront & milestones to date: $70.5M
- $10M equity investment from AstraZeneca
- Eligible to receive up to approximately $5.4B in potential milestone payments plus royalties
- Retained co-development and co-commercialization (US) options on PRS-060 and up to 2 additional programs

Boston Pharmaceuticals

- Boston Pharmaceuticals holds exclusive license for PRS-342
- Upfront & milestones to date: $10M
- Eligible to receive up to approximately $353M in potential milestone payments
- Entitled to tiered royalties

Genentech
A Member of the Roche Group

- 1 respiratory program + 1 ophthalmology program
- Upfront & milestones to date: $20M
- Eligible to receive over $1.4B million in potential milestone payments
- Entitled to tiered royalties
- Genentech has option to select additional targets in return for an option exercise fee

Seagen

- 3-program IO bispecific partnership
- Upfront & milestones to date: $35M
- Eligible to receive up to approximately $1.2B in potential milestone payments plus royalties
- $13M equity investment from Seagen
- Tucatinib drug supply for phase 2 combination trial of cinrebafusp alfa in HER2-low gastric cancer

Servier

- PRS-344: PD-L1/4-1BB antibody-Anticalin bispecific, for which Pieris holds full U.S. rights
- Upfront & milestones to date: ~$40M
- Eligible to receive up to approximately $447M in potential milestone payments
- Entitled to tiered royalties

Anticalin Technology Advantages: Differentiated Respiratory Platform

- Lipocalin templates deployed by Pieris in respiratory programs are abundant in the human lung and can permeate lung epithelium
- Stable, monovalent molecules with high melting temperatures and insensitivity to mechanical stress
- Inhalation pharmacokinetics suitable for once or twice daily administration and compatible with flexible treatment regimens
- Control of particle size distribution in critical size range in both “wet” and “dry” formulations to enable tailored delivery to discrete lung regions

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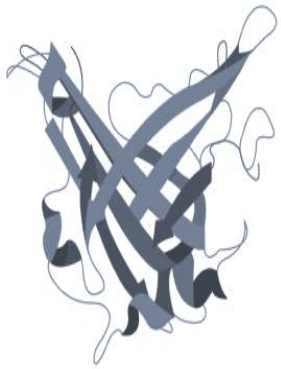
PRS-060/AZD1402: IL-4Rα Antagonist

Candidate	PRS-060/AZD1402
Function/MoA	Inhibiting IL4-Rα (disrupts IL-4 & IL-13 signaling)
Indications	Moderate-to-severe asthma
Development	Phase 2a in moderate asthmatics
Commercial Rights	Co-development and U.S. co-commercialization options, including gross margin share

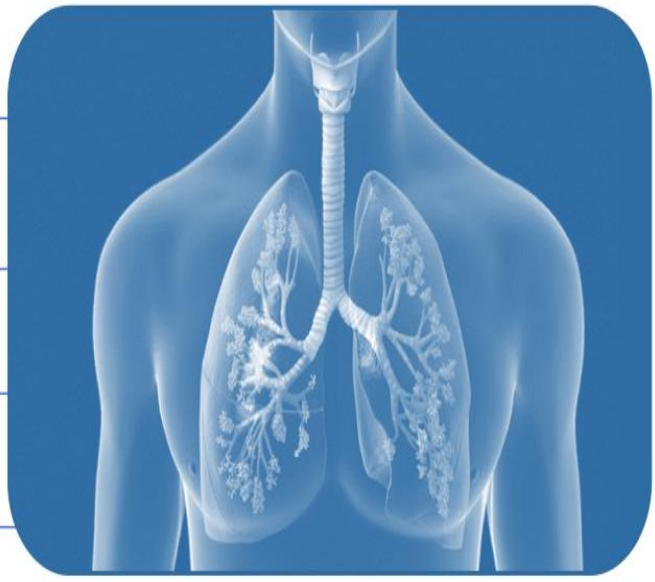


PRS-060/AZD1402

PRS-060 Phase 2a Trial

Part 1	**Patient Population:** Moderate controlled asthmatics **Primary Endpoint:** Safety and tolerability **Number of Patients:** ~45
Part 2	**Patient Population:** Moderate uncontrolled asthmatics with blood eosinophil count of ≥ 150 cells/µL and FeNO ≥ 25 ppb at screening **Primary Endpoint:** Improvement of FEV1 over four weeks relative to placebo **Number of Patients:** ~360

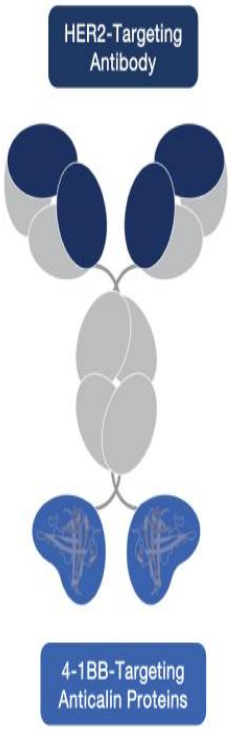
- Enrollment initiated 1Q 2021
- Dry powder formulation, administered b.i.d. over four weeks
- Up to three dose levels plus placebo
- Study is sponsored and funded by AstraZeneca



4-1BB & the Advantages of Anticalin-based Bispecifics

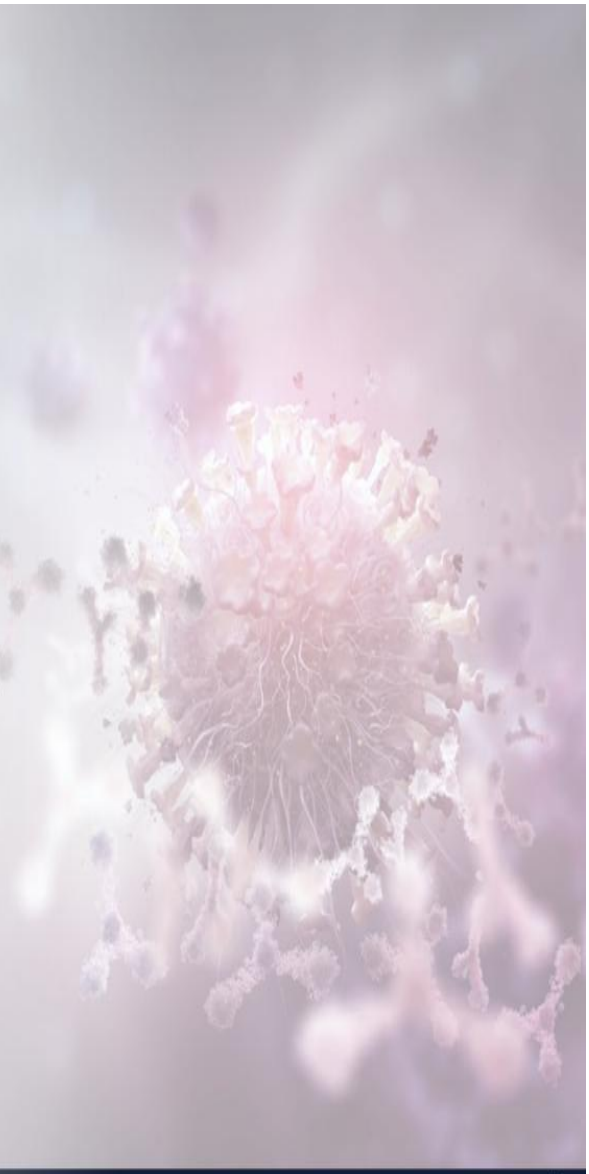
Cinrebafusp Alfa (PRS-343): Proprietary Lead IO Asset

Candidate	Cinrebafusp alfa (PRS-343)
Function/MoA	Tumor-targeted 4-1BB agonism and HER2 antagonism
Indications	HER2-high and HER2-low gastric cancer
Development	Initiating phase 2
Commercial Rights	Fully proprietary



Cinrebafusp Alfa Phase I Summary

- Acceptable profile observed at all doses tested with no dose-limiting toxicities
- Clinical benefit at active dose levels (≥2.5 mg/kg), including confirmed complete response and several confirmed partial responses
- Dose-dependent immune activation and 4-1BB modulation in both HER2-high and HER2-low expressing patients
- Durable anti-tumor activity in heavily pre-treated patient population, including "cold" tumors
- Moving into phase 2 in HER2-high and HER2-low gastric cancer
- As lead IO program, cinrebafusp alfa provides key validation of 4-1BB franchise and follow-on programs, including PRS-344 and PRS-342



Cinrebafusp Alfa Phase 1 Monotherapy Study

Study Objectives

Primary: Characterize Safety Profile
Identify MTD or RP2D

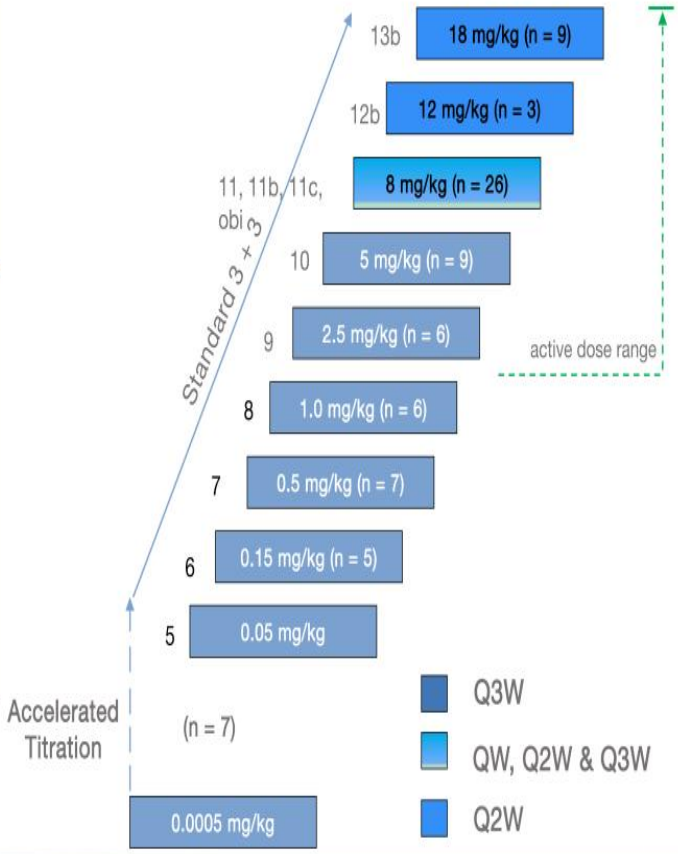
Secondary: Characterize PK/PD & Immunogenicity
Preliminary anti-tumor activity

Key Eligibility Criteria

Inclusion: Metastatic HER2+ solid tumors
Breast & Gastric/GEJ ≥ 1 prior anti-HER2 Tx
Measurable disease (RECIST v1.1)
ECOG 0 or 1

Exclusion: Symptomatic or unstable brain metastasis
Abnormal cardiac EF (< 45%)

Dose Escalation Study Design



Phase 1 Monotherapy Baseline Characteristics (N = 78)

Characteristic	n (%)
Age, Median (range)	63 (24–92)
Gender	
F	46 (59%)
M	32 (41%)
ECOG PS	
0	19 (24%)
1	59 (76%)
Prior Therapy Lines	
1	11 (14%)
2	10 (13%)
3	16 (21%)
4	12 (15%)
5+	29 (37%)
Median # of anti-HER2 Tx	
Breast	6
Gastric	2

Primary Cancer Type	n (%)
Gastroesophageal	34 (44%)
Breast	16 (21%)
Colorectal	12 (15%)
Gynecological	9 (12%)
Bladder	2 (3%)
Pancreatic	1 (1%)
Other – Cancer of Unknown Origin	2 (3%)
Other – Salivary Duct	1 (1%)
Melanoma	1 (1%)

Data cut-off: 25-Feb-21

Phase 1 Monotherapy Treatment Related Adverse Events at Active Doses (≥ 2.5 mg/kg)

Treatment Related Adverse Events (TRAEs occurring in > 1 patient; n = 53)	All Grades n (%)	Grade 1-2 n (%)	Grade 3-4 n (%)
Infusion related reaction	13 (25%)	9 (17%)	4 (8%)
Nausea	7 (13%)	7 (13%)	
Chills	6 (11%)	6 (11%)	
Vomiting	6 (11%)	6 (11%)	
Dyspnoea	4 (8%)	4 (8%)	
Fatigue	4 (8%)	4 (8%)	
Arthralgia	3 (6%)	2 (4%)	1 (2%)
Decreased appetite	3 (6%)	3 (6%)	
Non-cardiac chest pain	3 (6%)	3 (6%)	
Asthenia	2 (4%)	2 (4%)	
Diarrhoea	2 (4%)	2 (4%)	
Dizziness	2 (4%)	2 (4%)	
Headache	2 (4%)	2 (4%)	
Paraesthesia	2 (4%)	1 (2%)	1 (2%)
Pruritus	2 (4%)	2 (4%)	
Pyrexia	2 (4%)	2 (4%)	
Rash	2 (4%)	2 (4%)	

1 Gr 3 Ejection Fraction dec and 1 Gr 3 Heart Failure; both events occurred in one patient and resolved w/o sequelae.

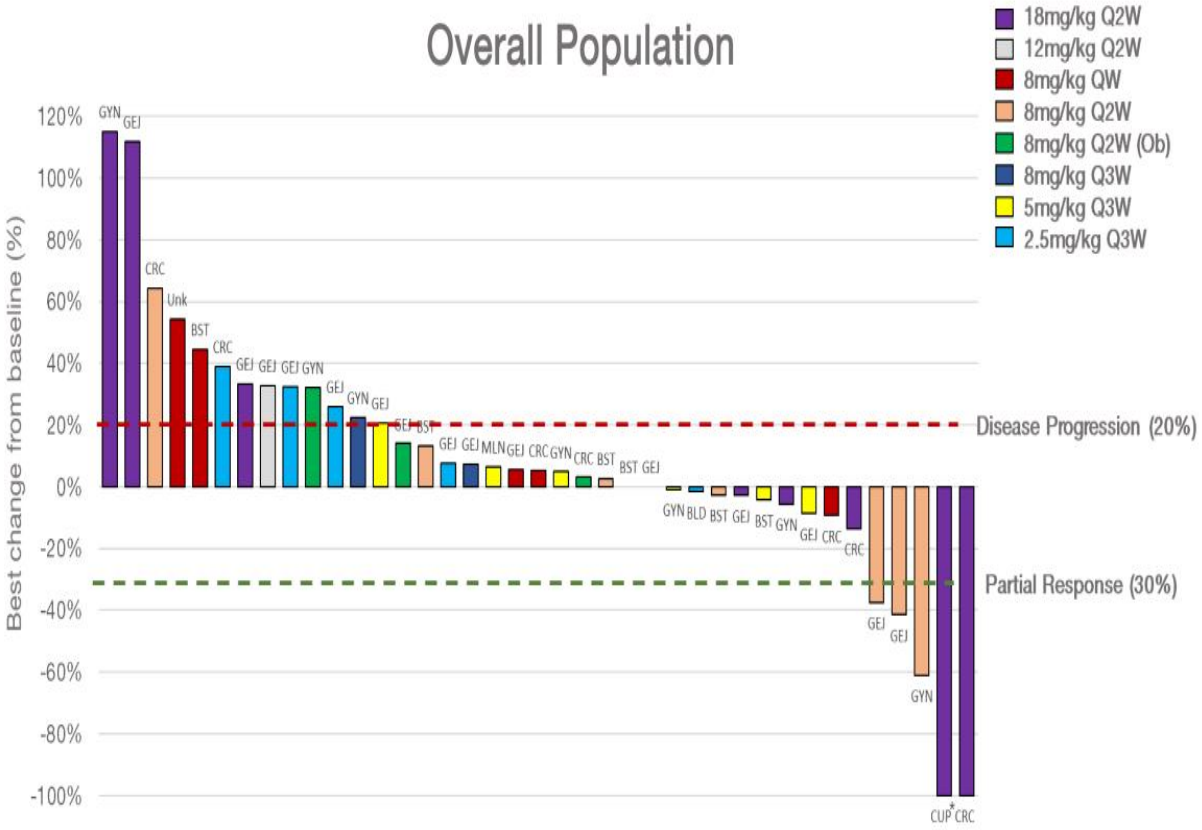
Data cut-off: 25-Feb-21

Summary of Responses in Phase 1 Monotherapy Study

Cohort	13b	12b	11c	Obi	11b	11	10	9	Total
Best Response	18 mg/kg, Q2W	12 mg/kg, Q2W	8 mg/kg, QW	8 mg/Kg, Q2W	8 mg/kg, Q2W	8 mg/kg, Q3W	5 mg/kg, Q3W	2.5 mg/kg, Q3W	
Evaluable Patients	8	2	5	4	7	4	7	5	42
CR	1	-	-	-	-	-	-	-	1
PR	1	-	-	-	3	-	-	-	4
SD	3	-	1	2	3	3	3	2	17
ORR	25%	0%	0%	0%	43%	0%	0%	0%	12%
DCR	63%	0%	20%	50%	86%	75%	43%	40%	52%

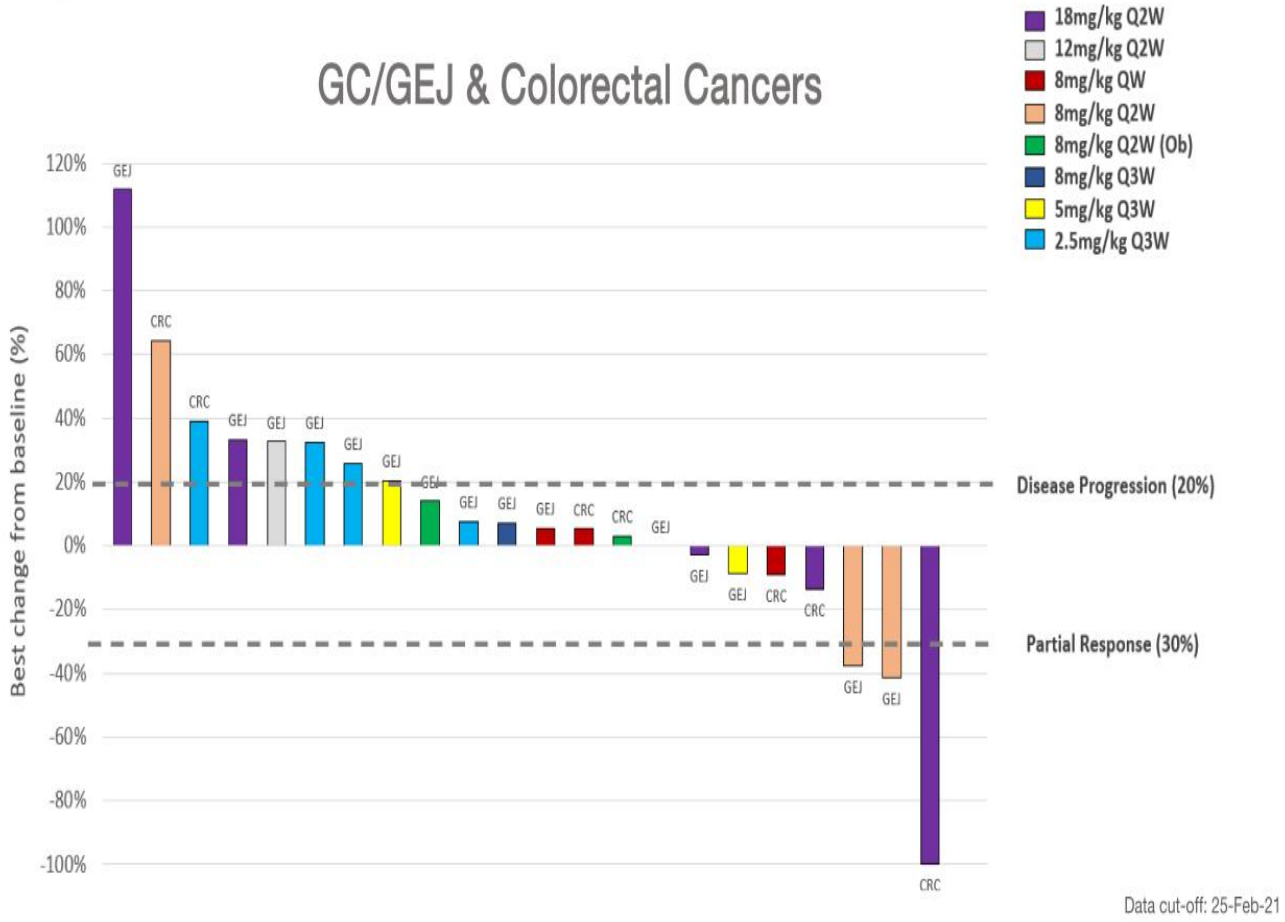
Data cut-off: 25-Feb-21

Cinrebafusp Alfa Phase 1 Monotherapy Efficacy Data: Analysis of Patients Treated at Active Doses



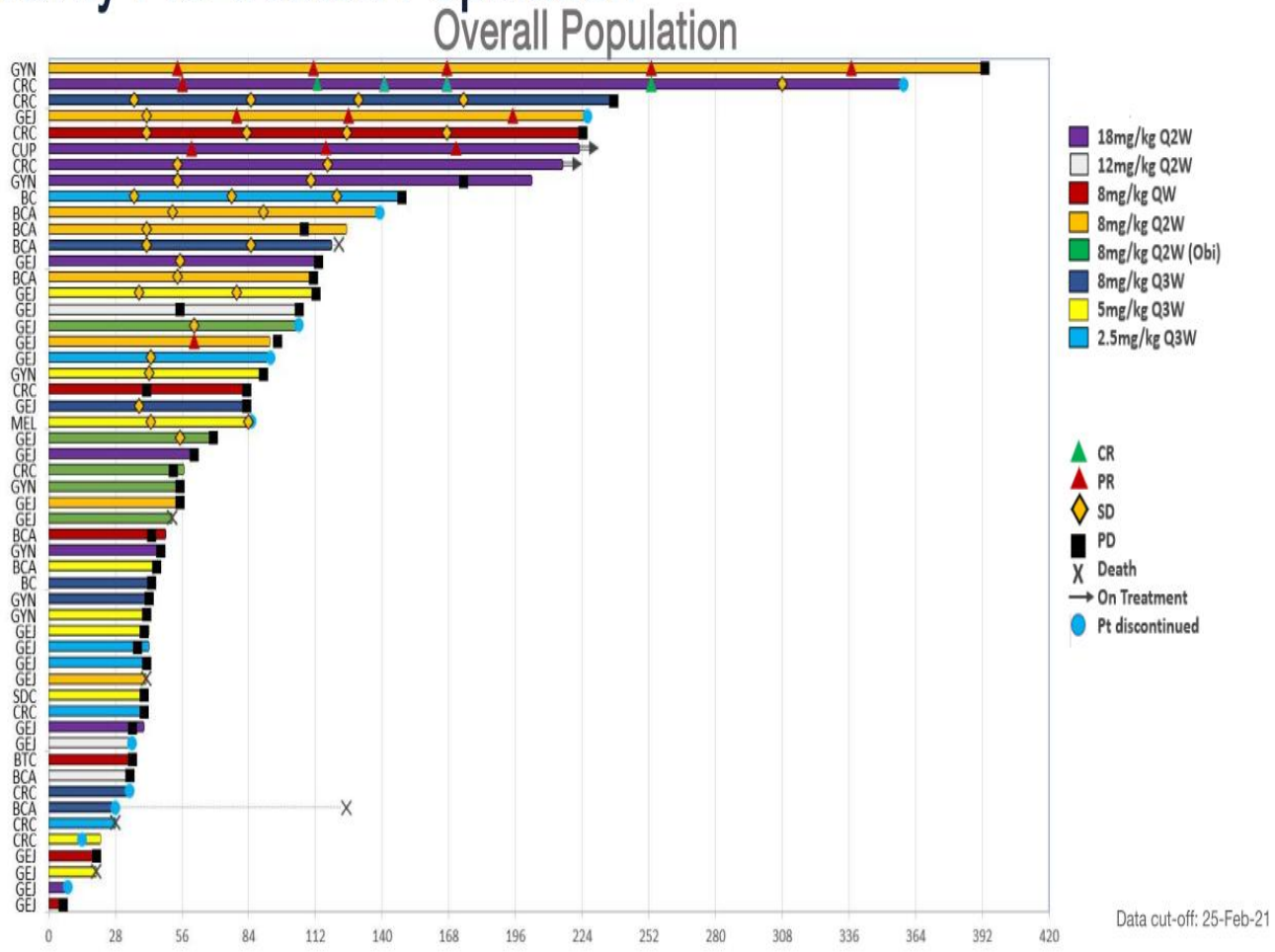
Data cut-off: 25-Feb-21
*Manual update for CUP patient from Medidata 9-Apr-21

Cinrebafusp Alfa Phase 1 Monotherapy Efficacy Data: Analysis of Patients Treated at Active Doses



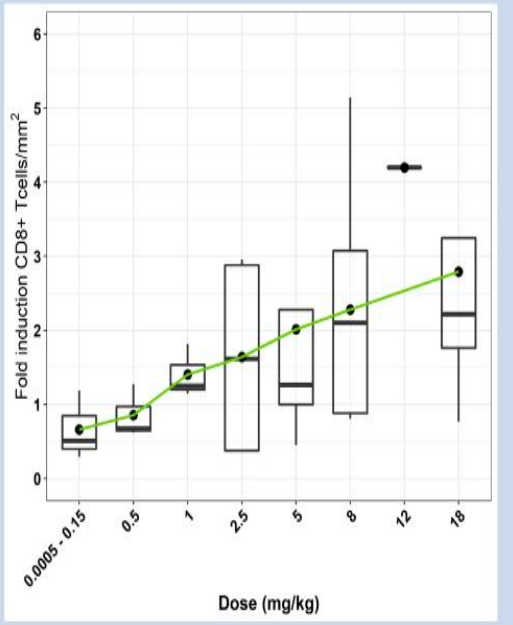
Data cut-off: 25-Feb-21

Durable Responses with Cinrebafusp Alfa Among Heavily Pre-treated Population

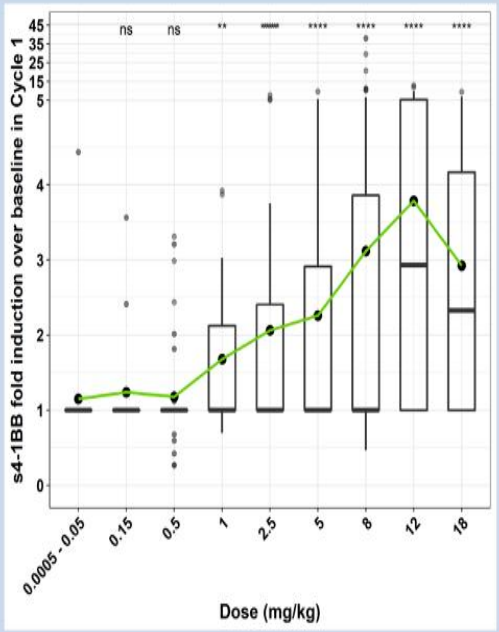


Cinrebafusp Alfa Shows Dose-dependent Activity Across Key Pharmacodynamic Parameters

Tumor (CD8+)



Serum (s4-1BB)



Connects group averages

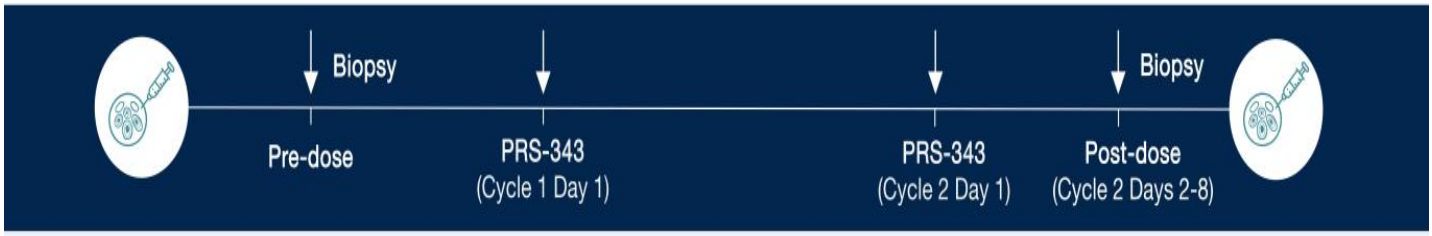
Median

Mann-Whitney U Test

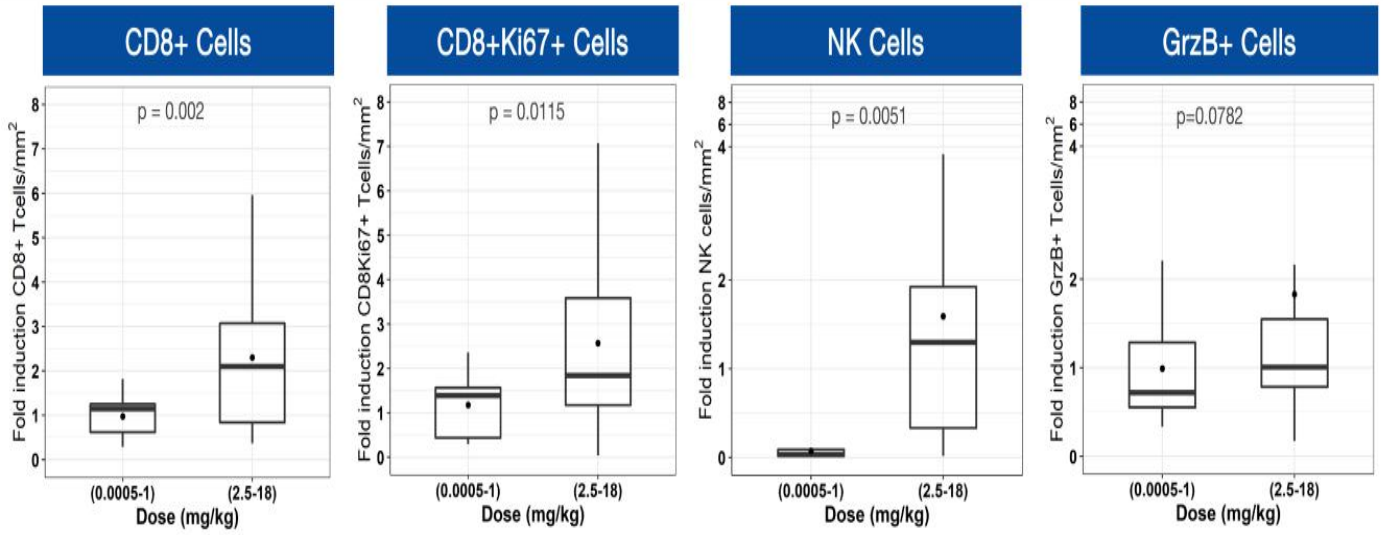
Dose at 8 mg/kg incorporates patients treated at Q1W, Q2W, or Q3W

Data cut-off: 25-Feb-21

Cinrebafusp Alfa Activates Adaptive and Innate Immunity in the Tumor



Based on preclinical and clinical data, serum concentration of > 20 µg/ml defines active dose range beginning at 2.5 mg/kg (Cohort 9)



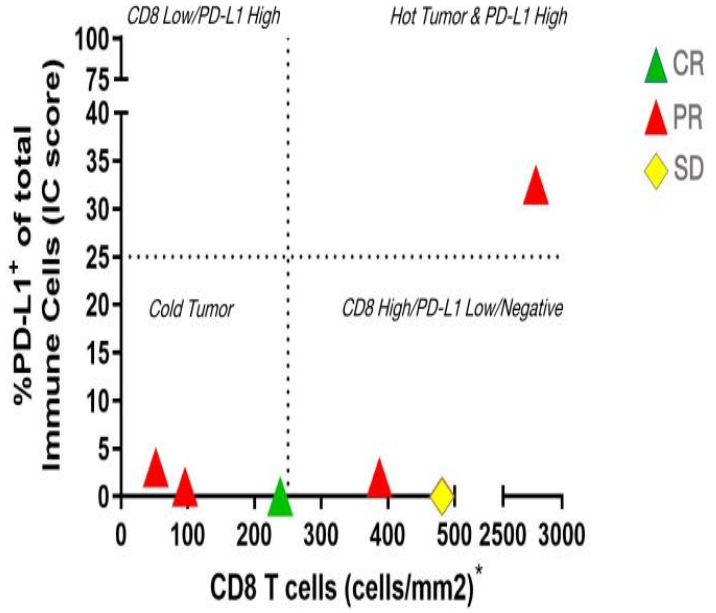
● Denotes group averages
— Median

Unpaired One-Tailed Welch's

Data cut-off: 25-Feb-21

Single-Agent Activity in Both "Hot" and "Cold" Tumors

PD-L1 status and CD8+ T cells levels in tumor biopsies



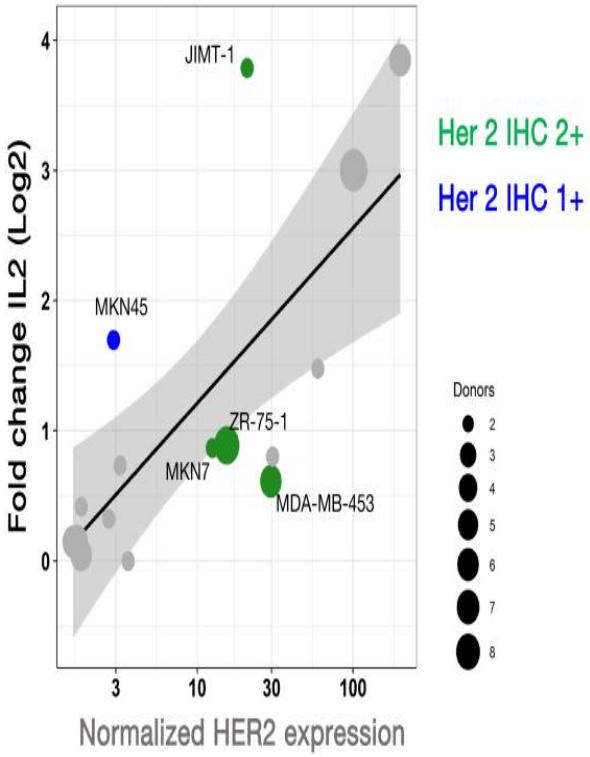
* Threshold informed by (Tumeh et al., 2014 and Blando et al., 2019)

Several patients with clinical benefit have low/negative PD-L1 status and low CD8 T cell numbers

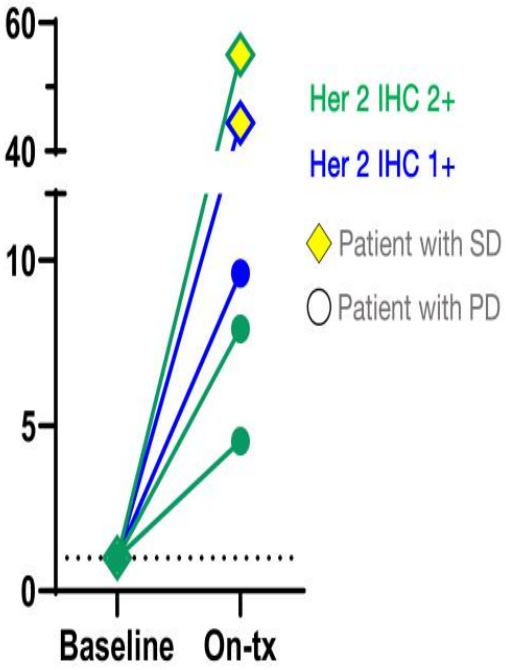
Data cut-off: 25-Feb-21

Signs of Preclinical and Clinical Activity in the HER2-Low Setting

PRS-343 enhances T cell activation in *in vitro* co-cultures with HER2-low tumor cell lines[1]



PRS-343 increases soluble 4-1BB in HER2-low-expressing patients



Data cut-off: 25-Feb-21

[1]*Hinner et al Clin Can Res 2019*

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Case Studies: PR in Gastric Cancer and CR in Rectal Cancer

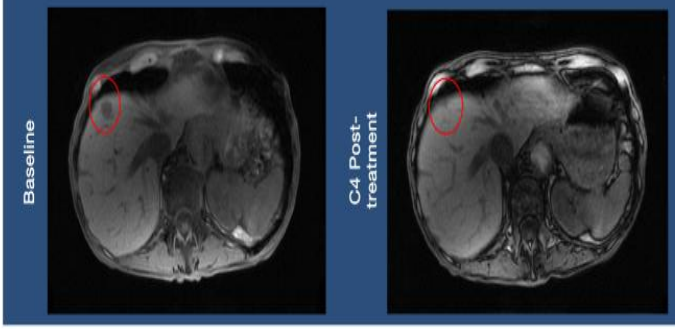
Patient Profile, Treatment History and Treatment Outcome

Gastric Cancer Patient with Partial Response

- 80-year-old woman; initial diagnosis in June 2017
- Gastric adenoca with mets to liver, LN and adrenals
- Treated with 8 mg/kg Q2W of PRS-343
- HER2 IHC 3+; PD-L1 positive (CPS=3) ; NGS: ERBB2 amplification

Prior Treatment includes:

- Trastuzumab, Pembrolizumab + Capecitabine/oxaliplatin
- Nivolumab with IDO1 inhibitor (investigational drug)

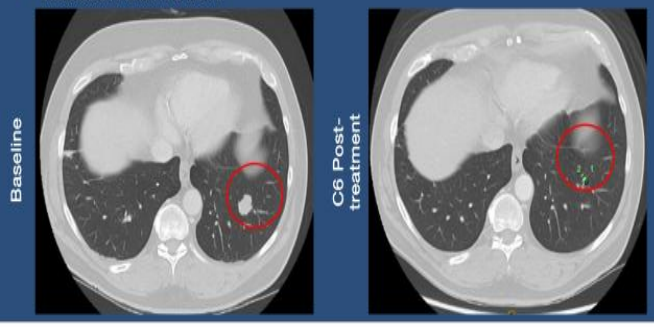


Rectal Cancer Patient with Complete Response

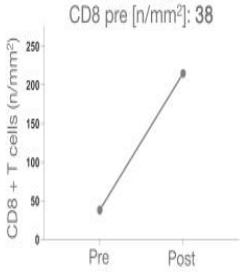
- 59-year-old male; initial diagnosis in March 2017
- Rectal cancer with cardiac and lung mets
- Treated with 18 mg/kg Q2W of PRS-343
- Foundation One Her2 amplification; verified in-house to be IHC 3+; MSS, TMB low

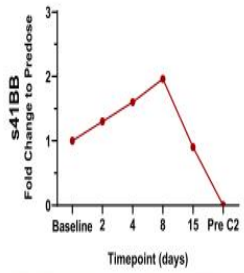
Prior Treatment includes:

- Folfiri/Avastin
- 5FU/Avastin maintenance
- Irinotecan/Avastin & SBRT

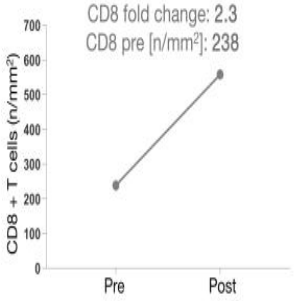


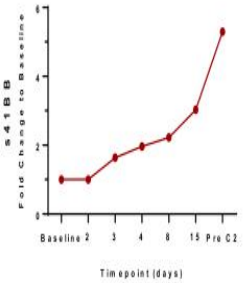
CD8 fold change: **5.7**
CD8 pre [n/mm²]: **38**





CD8 fold change: **2.3**
CD8 pre [n/mm²]: **238**





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Case Study: PR in Cancer of Unknown Primary

Patient Profile, Treatment History and Treatment Outcome

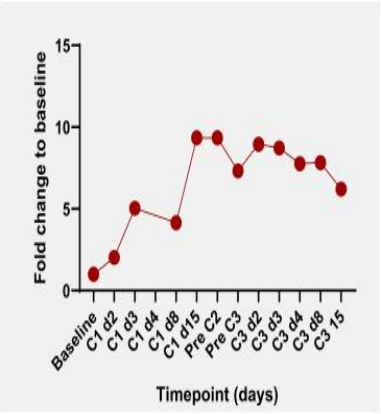
Patient Profile

82-year-old male
Initial diagnosis October 2019
Carcinoma of Unknown Primary
Stage 4
HER2 amplification via MD Anderson NGS; MSS- stable; TMB unknown

Treatment History

Open Radical Prostatectomy
Radiation
Carboplatin + gemcitabine

s4-1BB Serum



Lesions	Lesion Site	Lesion Size (mm)			
		Pre-treatment	Post-treatment		
			Cycle 2	Cycle 4	Cycle 6
Target 1	Lung, right lower lobe mass	25	13	0	0
	Total	25	13	0	0
	% Change from Baseline		-48%	-100%	-100%
Non-target 1	Lung, bilateral pulmonary masses	Present	Not assessed	Present	Present
Non-target 2	Lymph nodes, mediastinal and hilar	Present	Not assessed	Present	Present
Overall Response			PR	PR	PR

Data cut-off: 25-Feb-21

Case Study: SD in Colorectal Cancer

Patient Profile, Treatment History and Treatment Outcome

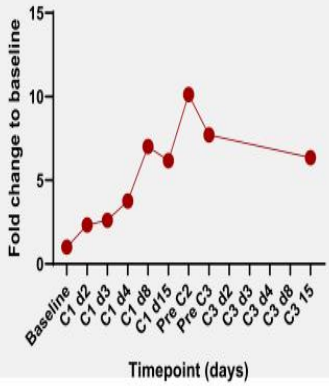
Patient Profile

56-year-old female
Initial diagnosis Jan 2009
Stage 4 Colorectal Adenocarcinoma Cancer
Archival HER2 3+
MSI stable; KRAS, NRAS, BRAF wt

Treatment History

9 prior lines of therapy, including:
Folfiri
Folfox + Avastin
5-FU + bevacizumab
trastuzumab/pertuzumab
Investigational agent (immune stimulator antibody conjugate (ISAC) with antibody similar to trastuzumab

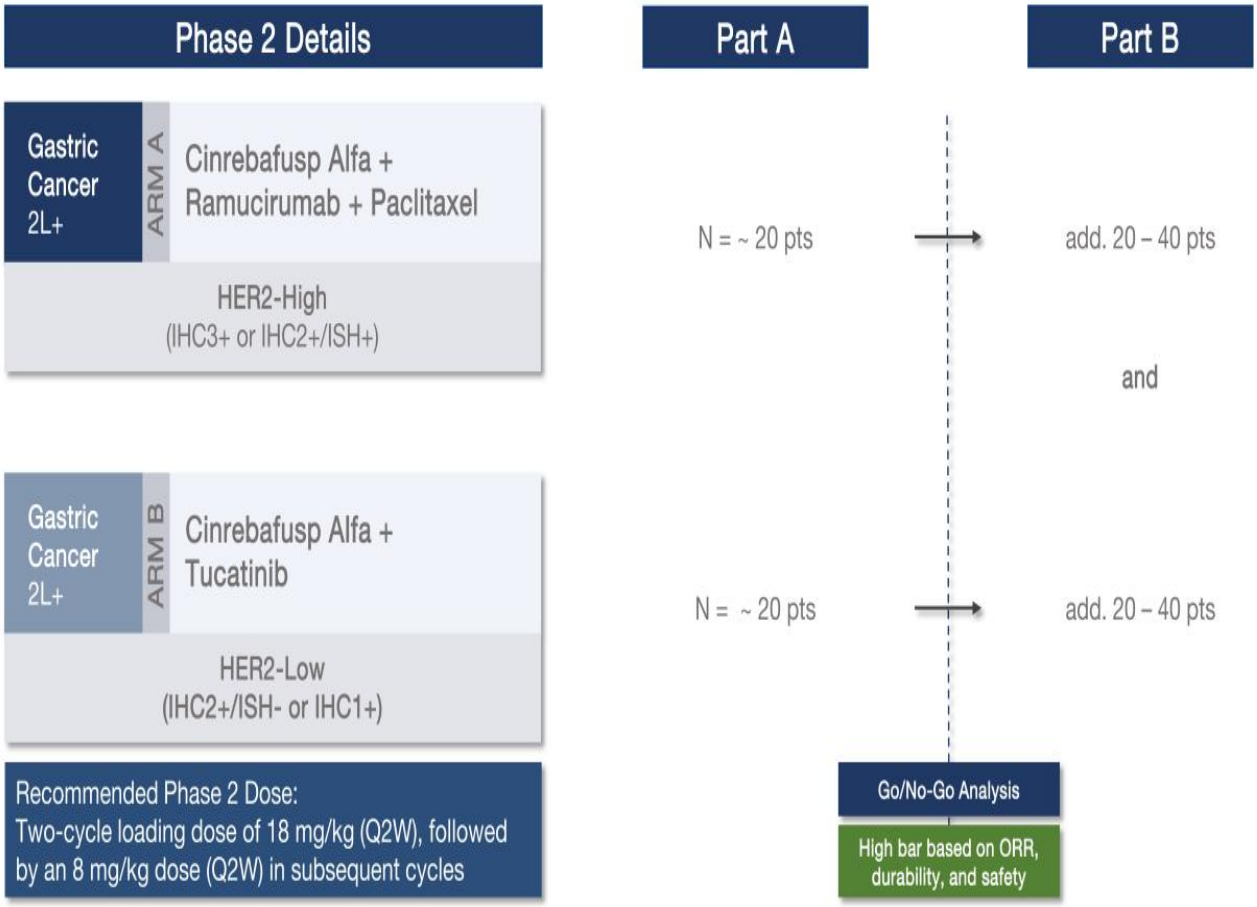
s4-1BB Serum



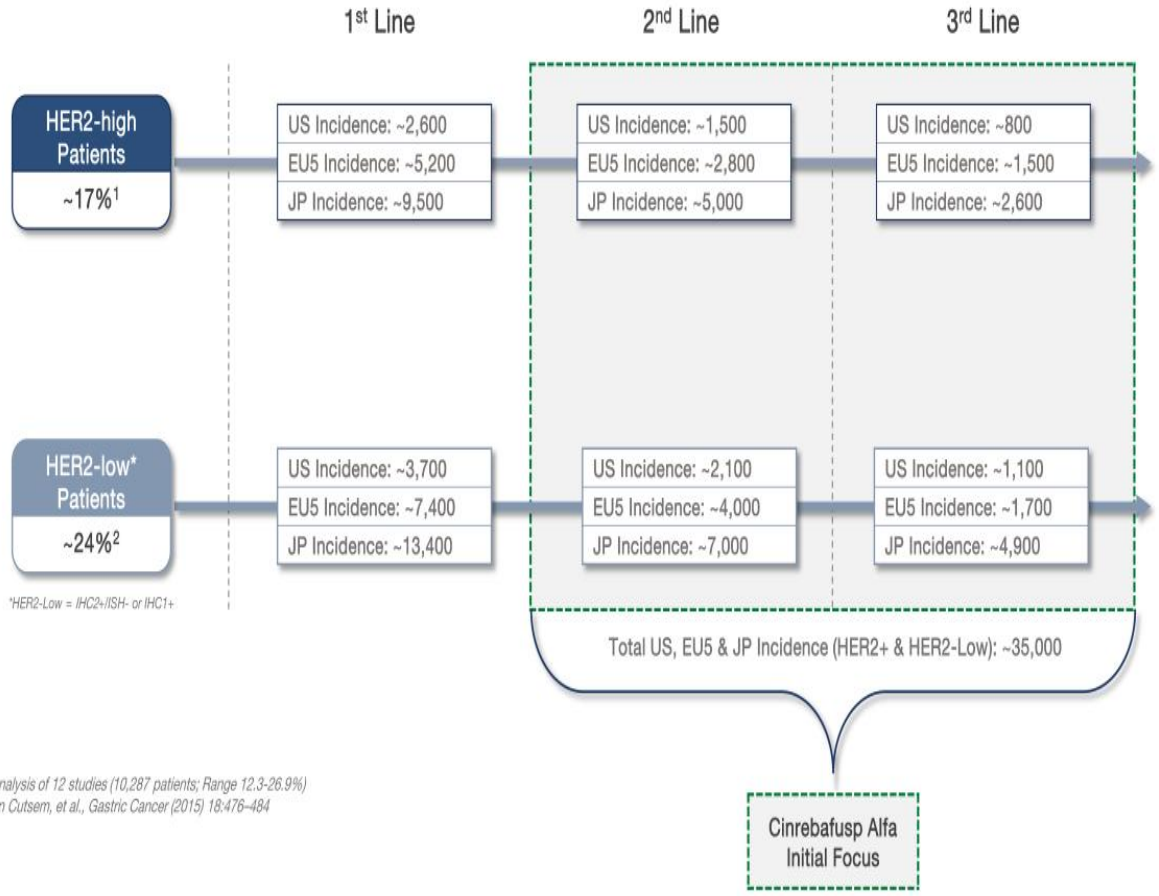
Lesions	Lesion Site	Lesion Size (mm)			
		Pre-treatment	Post-treatment		
			Cycle 2	Cycle 4	Cycle 6*
Target 1	Lung, right upper lobe pulmonary nodule	10	8	8	-
Target 2	Lung, right lower lobe pulmonary nodule	12	11	11	-
	Total	22	19	19	-
	% Change from Baseline		-14%	-14%	-
Non-target 1	Lung, multiple pulmonary nodules	Present	Present	Present	-
CEA		<1.9	1.1	1.3	-

Data cut-off: 25-Feb-21
*Data not yet available due to COVID-related delays

Cinrebafusp Alfa Clinical Development Plan



Cinrebafusp Alfa Opportunity in HER2-High & HER2-Low Gastric Cancer



1) *Meta Analysis of 12 studies (10,287 patients; Range 12.3-26.9%)*
2) *Eric Van Cutsem, et al., Gastric Cancer (2015) 18:476–484*

Scientific Rationale for Combining Cinrebafusp Alfa & SoC

Paclitaxel – Chemotherapy

- Reduces tumor bulk
- Releases antigen
- Improves T cell : tumor target ratio

Ramucirumab – Anti-Angiogenic[1-3]

- Normalizes vascularization
- Alters tumor barrier to T cell penetration
- Reduces Tregs & inhibits TAMs

Cinrebafusp Alfa – 4-1BB Agonist

- Increases T cell survival and metabolic fitness in the TME
- Induces T cell memory
- Drives T cell expansion
- Induces anti-tumor cytolytic activity

1 - Allen et al., Science Translational Medicine 2017
2 - Juang et al. Front Immunology 2018
3 - Tada et al., Journal for Immunotherapy of Cancer 2018

Scientific Rationale for Combining Cinrebafusp Alfa & Tucatinib

Tyrosine kinase inhibitors (tucatinib)

- Upregulates or stabilizes tumor cell surface HER2 expression[2,3,4]
- Increases clustering potential of cinrebafusp alfa on tumor cells to drive enhanced 4-1BB cross-linking

Cinrebafusp Alfa – Dual MoA

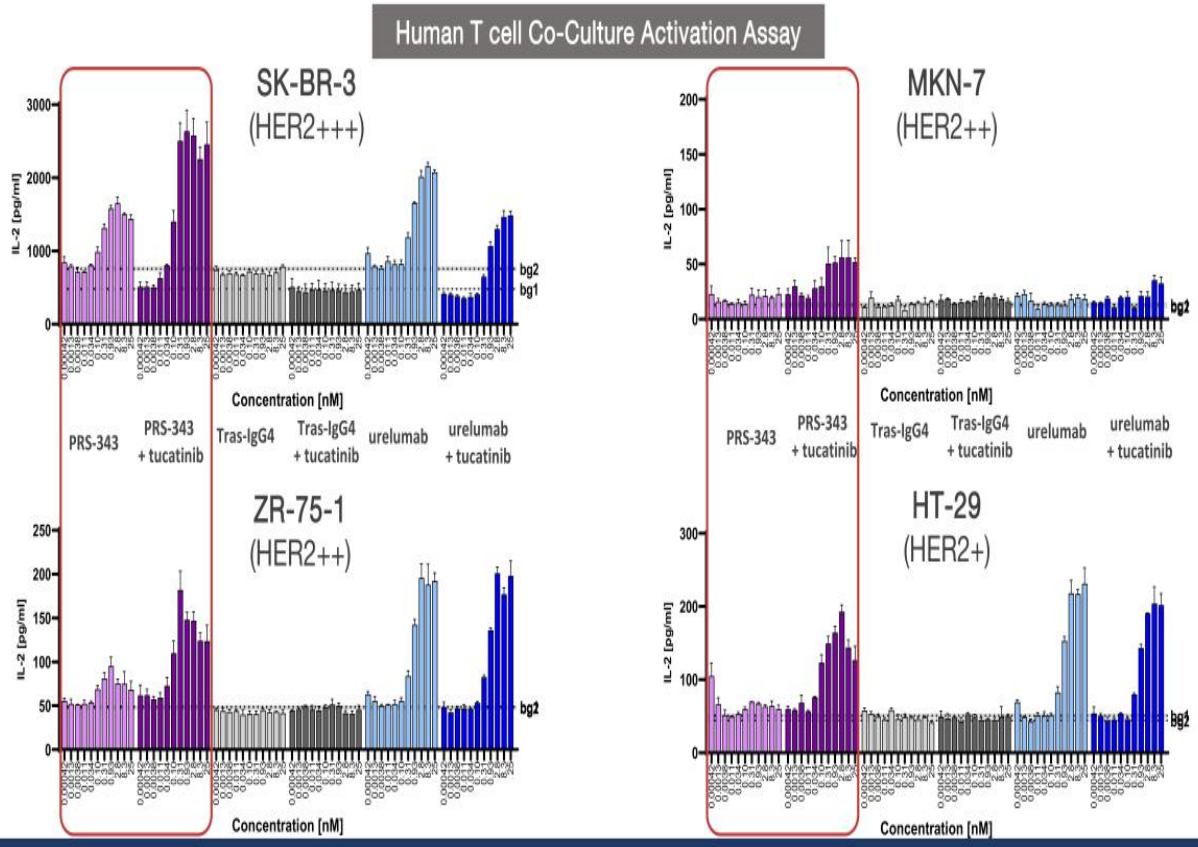
- Inhibits HER2 signaling AND activates tumor-specific T cells in tumor microenvironment

Complements Both MoAs

- Enhances inhibition of HER2 signaling by concurrent binding to HER2 on the tumor cell surface and TKI inhibition of the internal kinase signaling domain[1]
- *In vitro*, combination leads to significantly increased T cell activation in the presence of HER2-Low cell lines

1 - Baselga J., Lancet, 2012;
2 - Maruyama T., et al, Anticancer Res., 2011
3 - Scaltriti M., et al, Oncogene, 2009
4 - Hartmans, et al, Oncotarget,, 2017

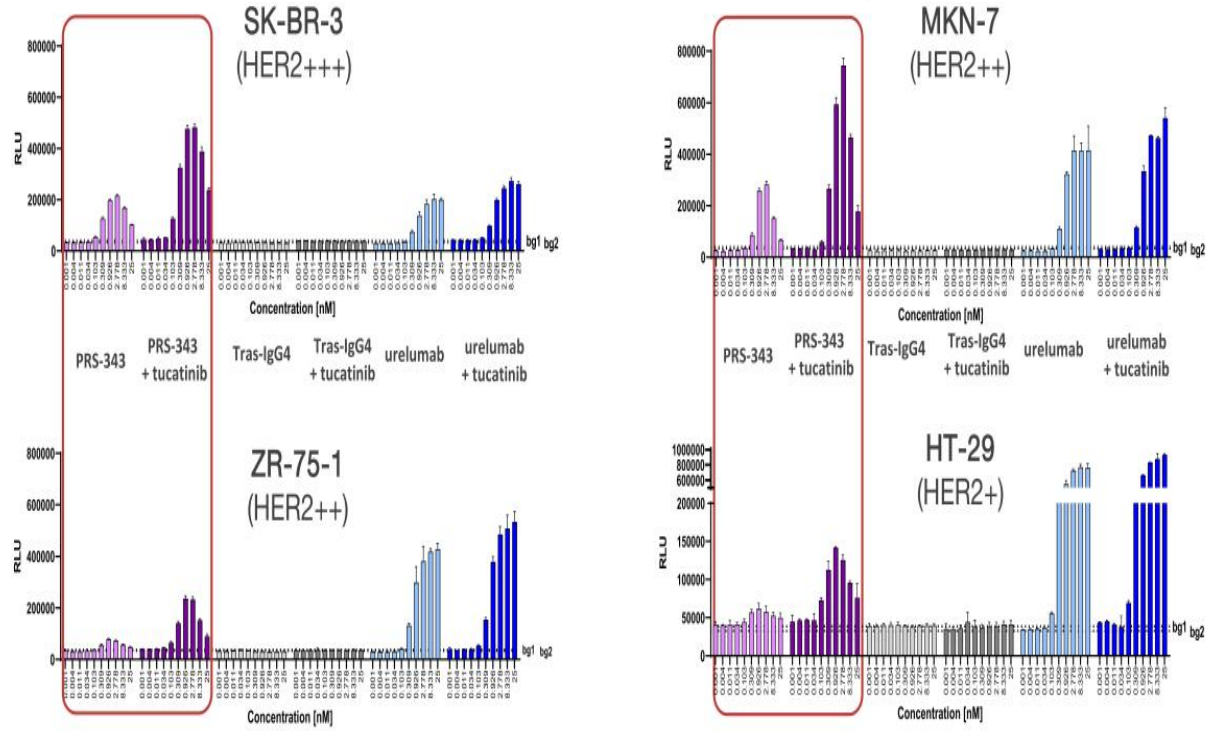
Cinrebafusp Alfa and Tucatinib Combination Enhances T-cell Activation



Increased IL-2 secretion observed when cinrebafusp alfa was combined with fixed dose tucatinib in a co-culture assay with SK-BR-3 (high HER2), MKN-7, ZR-75-1 (medium HER2) and HT-29 (low HER2) tumor cell lines

Cinrebafusp Alfa and Tucatinib Combination Leads to Enhanced 4-1BB Signaling

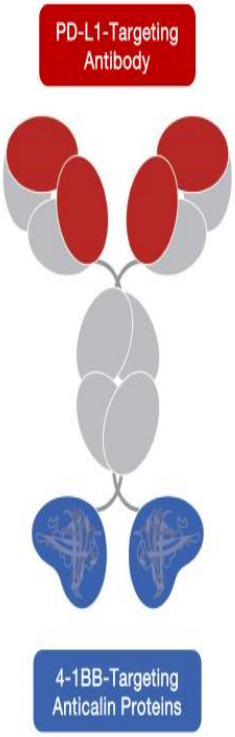
(4-1BB Reporter Cell Assay)



Increased 4-1BB signaling observed when cinrebafusp alfa was combined with fixed dose tucatinib in a reporter assay with SK-BR-3 (high HER2), MKN-7, ZR-75-1 (medium HER2) and HT-29 (low HER2) tumor cell lines

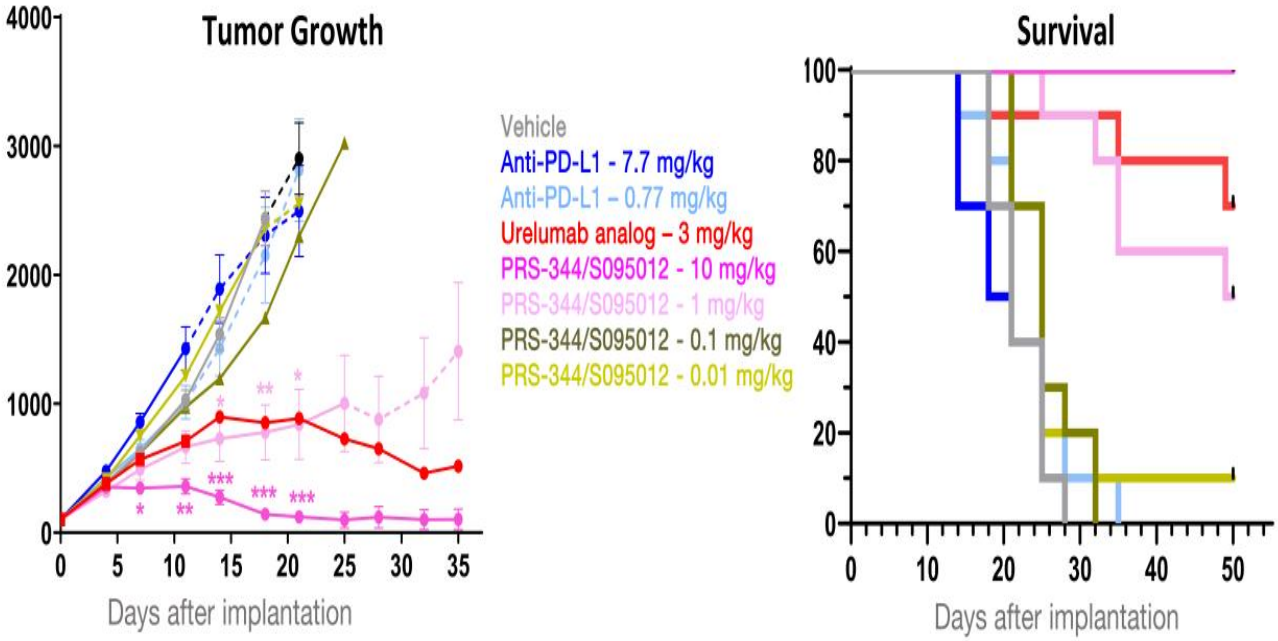
PRS-344/S095012: Meaningfully Building on Localized MoA of Cinrebafusp Alfa

Candidate	PRS-344
Function/MoA	Localized 4-1BB agonism with PD-L1 antagonism
Indications	N.D.
Development	2021 IND expected (in co-dev with Servier)
Commercial Rights	Opt-in for co-development with full U.S. commercial rights; royalty on ex-U.S. sales



PRS-344 Drives Strong Anti-tumor Activity in Anti-PD-L1 mAb-resistant Mouse Model

h-4-1BB knock-in mice subcutaneously implanted with MC-38-huPD-L1 cells



- Dose-dependent anti-tumor response that leads to significant extension of survival
- Superior to equimolar doses of anti-PD-L1 mAb treatment alone

Financial Overview (As of 3/31/21)

$66.8M (~$120M proforma*)	$0.0	59.7M*
Cash & Cash Equivalents	Debt	CSO

>$175M non-dilutive capital from partnerships since 2017

*Excludes $23M from PRS-060 phase 2a milestone and AstraZeneca equity investments (along with ~3.6M common shares issued), $10 million from Boston Pharmaceuticals and $20 million from Genentech

Appendix


PRS-060 Phase I

PRS-060 Phase I Multiple Ascending Dose Trial

Strategic Objectives	Ascertain PK/PD with a reliable biomarker to confirm local target engagement and inform Phase II dosage regimen
Trial Design Highlights	Dosing patients with mild asthma with elevated FeNO levels (≥35 ppb), to receive inhaled PRS-060 or pbo b.i.d.* over a 10-day period

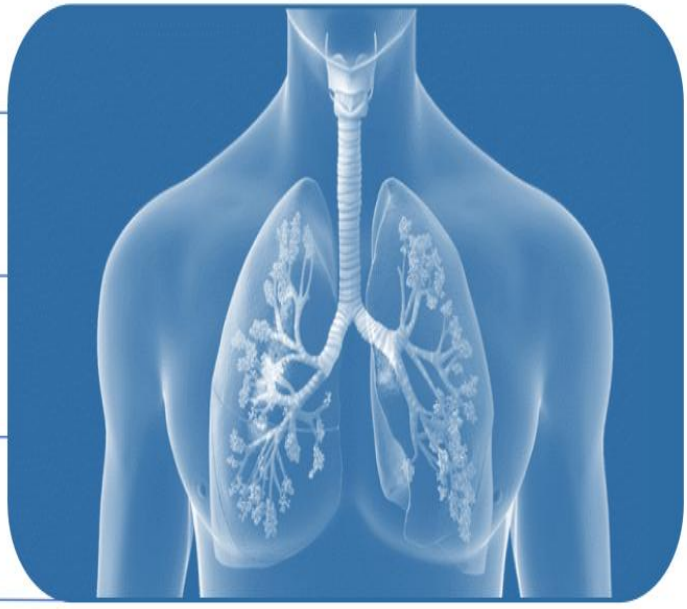
*q.d. on Day 10

Initiated in July 2018

Evaluating safety, tolerability, PK, PD and will also evaluate FeNO reduction vs. placebo

Measuring safety, tolerability and FeNO changes days 1-10,17, and 40

Pieris is sponsoring the trial, AstraZeneca is reimbursing Pieris for all associated costs



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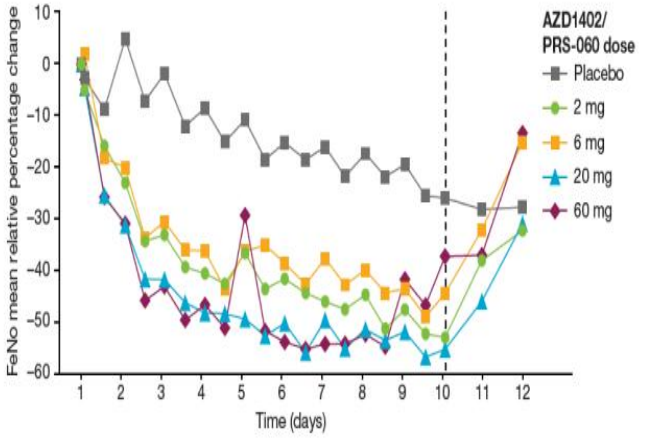
Phase 1b Interim Results: Favorable Safety Profile

- All doses of AZD1402/PRS-060 tested in the study were well tolerated
- No treatment-related serious AEs were observed

System organ class AE Preferred Terms[b]	Placebo (N = 12) n (%) m	AZD1402/PRS-060[c] (N = 30) n (%) m	Overall (N = 42) n (%) m
Gastrointestinal disorders	4 (33.3) 4	13 (43.4) 14	17 (40.5) 18
Dry mouth	1 (8.3) 1	2 (6.7) 2	3 (7.1) 3
Nausea	1 (8.3) 1	3 (10.0) 3	4 (9.5) 4
Infections and infestations	1 (8.3) 1	7 (23.3) 8	8 (19.0) 9
Upper respiratory tract infection	1 (8.3) 1	3 (10.0) 4	4 (9.5) 5
Nervous system disorders	5 (41.7) 9	13 (43.4) 18	18 (42.9) 27
Headache	3 (25.0) 6	5 (16.7) 7	8 (19.0) 13
Presyncope	0	4 (13.3) 6	4 (9.5) 6
Respiratory, thoracic and mediastinal disorders	6 (50.0) 6	14 (46.7) 15	20 (47.6) 21
Cough	1 (8.3) 1	4 (13.3) 4	5 (11.9) 5
Rhinorrhoea	2 (16.7) 2	1 (3.3) 1	3 (7.1) 3
Wheezing	2 (16.7) 2	4 (13.3) 5	6 (14.3) 7

Phase 1b Interim Results: Robust FeNO Reduction

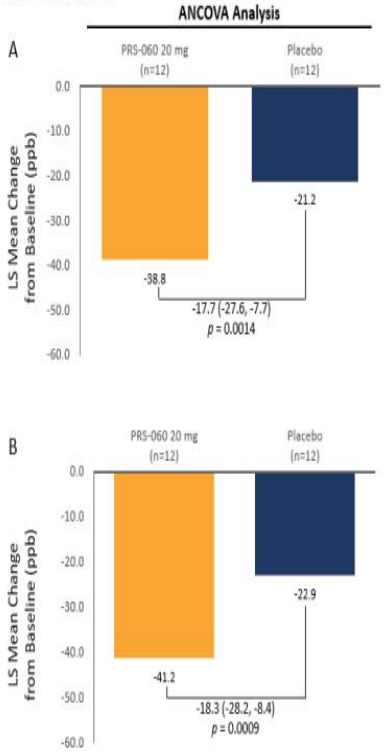
PRS-060 Relative FeNO Reduction (Emax Analysis)



PRS-060, mg (delivered)	n	Reduction vs. placebo, % (95% CI)	p-value
2	6	24.0 (1.8–41)	0.04
6	6	24.3 (2.7–41)	0.03
20	12	36.4 (22–48)	<0.0001
60	6	30.5 (10–46)	0.005
Placebo	12		

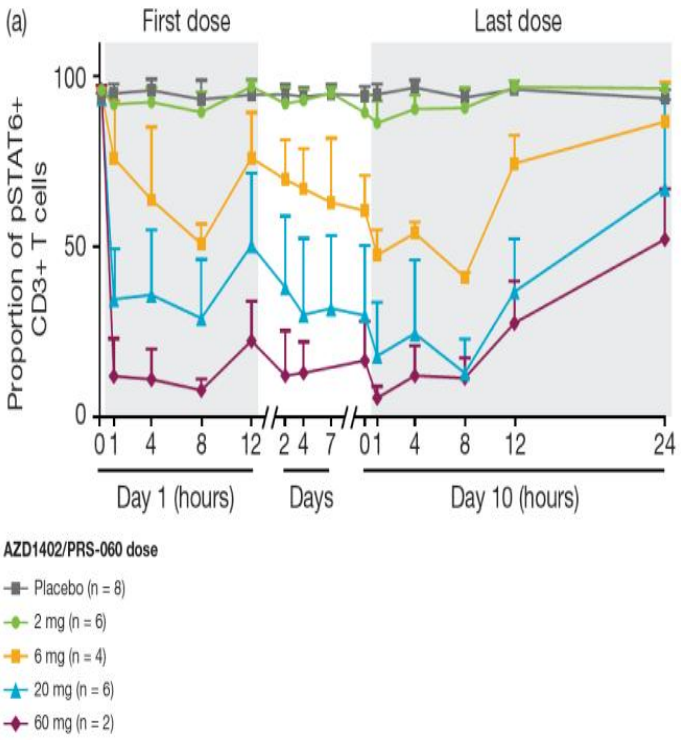
PRS-060 Relative FeNO Reduction (ANCOVA Analysis)

Mean change from baseline in FeNO levels at 0.5h (A) and 2h (B) post-dose on Day 10 in participants with mild asthma



Phase 1b Interim Results: Pharmacological Versatility

pSTAT6 levels over time following inhalation of PRS-060



No systemic target engagement and minimal systemic exposure was observed at the 2mg dose, suggesting that local target engagement by the drug is sufficient to reduce airway inflammation

Pharmacological versatility, given low-dose FeNO reduction with no observed systemic activity (pSTAT6) versus high-dose FeNO reduction with systemic activity

Cinrebafusp Alfa – Biomarkers

Soluble 4-1BB (s4-1BB): Blood-based Biomarker of Cinrebafusp Alfa Engagement

- s4-1BB is an alternatively spliced form of 4-1BB receptor lacking the transmembrane encoding exon (Setareh et al., 1995; Shao et al., 2008)
- s4-1BB is **released by leukocytes in an activation-dependent manner** (Michel et al., 2000; Salih et al., 2001; Schwarz et al., 1996)
- s4-1BB is **produced with a slightly delayed kinetic to pathway activation.** Hypothesized role is as a negative regulator, keeping 4-1BB-mediated co-stimulation in check

s4-1BB utility as a pathway specific biomarker provides ability to track cinrebafusp target engagement and activity using serum samples

255 State Street
Boston, MA 02109
USA

Zeppelinstraße 3
85399 Hallbergmoos
Germany

NASDAQ: PIRS