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): January 13, 2020

PIERIS PHARMACEUTICALS, INC.
(Exact Name of Registrant as Specified in its Charter)

Nevada	**001-37471**	**EIN 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 99.1 and incorporated by reference herein is the January 2020 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 January 2020.

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: January 13, 2020

/s/ Tom Bures

Tom Bures

Vice President, Finance

INVESTOR PRESENTATION

JANUARY 2020

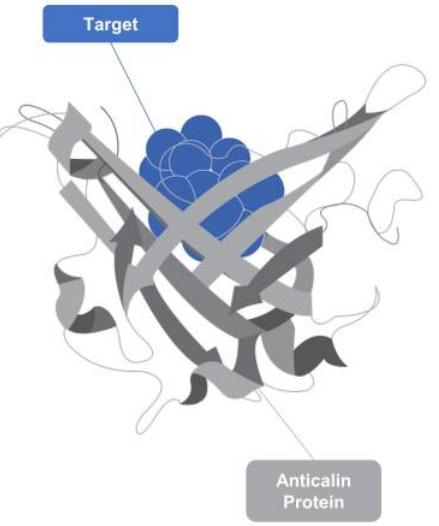
Forward Looking Statements

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 press release that are not purely historical are forward-looking statements. Such forward-looking statements include, among other things, 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. 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; our ability to address the requests of the FDA; competition in the industry in which we operate and market conditions. These forward-looking statements are made as of the date of this press release, 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, 2018 and the Company's Quarterly Reports on Form 10-Q.

What are Anticalin® proteins?

A Novel Therapeutic Class with Favorable Drug-Like Properties

- Derived from lipocalins (human extracellular binding proteins)
  - TLC and NGAL lipocalins used as "templates" for drug development
- Engineerable binding pocket for robust target engagement
- Monomeric, monovalent, small size (~18 kDa vs 150kDa mAbs)
- Can be formulated for inhalable delivery
- Can be formatted into novel bi/multispecific constructs
- Broad IP position



Underpinned by a Powerful Drug Discovery Platform

- Highly diverse libraries (>10^{11}) o potential drug candidates…
- Automated high-throughput drug screening technology (phage display)…
- Extensive protein engineering know-how…
- …resulting in high hit rates, quick-to-development candidate

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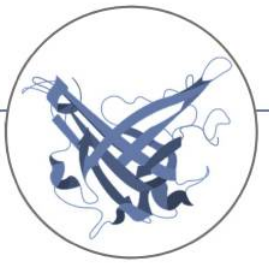
Company Snapshot

Pipeline Highlights

- **PRS-060:** Inhaled IL4-Rα antagonist for moderate-to-severe asthma (partnered with AstraZeneca)
- **Next-generation respiratory:** Includes 4 discovery-stage inhaled therapeutics programs (2 proprietary, 2 partnered with AstraZeneca)
- **PRS-343:** 4-1BB/HER2 bispecific for solid tumors
- **PRS-344:** 4-1BB/PD-L1 bispecific (partnered with Servier)



Anchor Partnerships

- Validation through three anchor partnerships
- $120+M in upfront payments and milestones since January 2017
- Each partnership includes options for co-development & US-focused commercialization rights
- Value-driving opt-in for PRS-060 after phase 2a completion

2020 Catalysts

- **Respiratory:**
  - ❑ PRS-060 phase 2a trial initiation
  - ❑ Data and rationale for advancement into IND-enabling studies for wholly owned inhaled program
- **IO:**
  - ❑ PRS-343 complete monotherapy phase 1 escalation data
  - ❑ PRS-343 complete combination with atezolizumab phase 1 escalation da
  - ❑ PRS-343 phase 1 expansion initiati
  - ❑ PRS-344 IND 1H2020

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Partnerships

AstraZeneca

- PRS-060 + 4 additional novel inhaled Anticalin protein programs
- Retained co-development and co-commercialization (US) options on PRS-060 and up to 2 additional programs
- $57.5M upfront & 2017 milestone
- ~$2.1B in milestone potential, plus double-digit royalties
- AZ funds all PRS-060 development costs through post-phase 2a co-development opt-in decision
- Access to complementary formulation and device know-how for inhaled delivery

SERVIER

- PRS-344: PD-L1/4-1BB antibody-Anticalin bispecific
- 5-program deal (all bispecific fusion proteins)
- Pieris retains option for full U.S. rights for 3 out of 5 programs
- ~$31M upfront payment, ~$1.8B milestone potential
  - ✓ Two preclinical milestones achieved for PRS-344
- Up to low double-digit royalties on non-co-developed products

SeattleGenetics®

- 3-program partnership based on tumor-localized costimulatory bispecific fusion proteins
- Pieris retains opt-in rights for 50/50 glob profit split and U.S. commercialization rights on one of the programs
- $30M upfront payment, ~$1.2B milestor potential
- Up to double-digit royalties on non-co-developed products

Strong Partners • Significant Cash Flow • Retained Commercial Rights

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Pipeline

RESPIRATORY

CANDIDATE	TARGETS	PARTNER	COMMERCIAL RIGHTS	DISCOVERY	PRECLINICAL	PHASE I	PHAS
PRS-060	IL4-Rα	AstraZeneca	Pieris Worldwide Profit-Share Option				
Proprietary Programs	n.d.	n/a	Pieris Worldwide				
AstraZeneca Programs*	n.d.	AstraZeneca	Pieris Worldwide Profit-Share Option*				

*4 additional respiratory programs (3 active, 1 forthcoming) in collaboration with AstraZeneca, 2 of which carry co-development and co-commercialization options for Pieris

IMMUNO-ONCOLOGY

CANDIDATE	TARGETS	PARTNER	COMMERCIAL RIGHTS	DISCOVERY	PRECLINICAL	PHASE I	PHAS
PRS-343	HER2/4-1BB	n/a	Pieris Worldwide				
	+ Anti-PD-L1	n/a					
PRS-344	PD-L1/4-1BB	SERVIER	Pieris U.S. Rights				
Servier Programs†	n.d.	SERVIER	Pieris U.S. Option†				
Proprietary IO Programs	n.d.	n/a	Pieris Worldwide				
Seattle Genetics Programs‡	n.d.	SeattleGenetics	Pieris U.S. Option‡				

†3 additional IO bispecific programs in collaboration with Servier, with Pieris retaining US rights for 2 of 4 active programs

‡3 bispecific programs (1 active, 2 forthcoming) in collaboration with Seattle Genetics, with Pieris retaining US rights for 1 program

OTHER DISEASE AREAS

CANDIDATE	TARGETS	PARTNER	COMMERCIAL RIGHTS	DISCOVERY	PRECLINICAL	PHASE I	PHAS
PRS-080	Hepcidin	ASKA	Major Markets Ex-ASKA Territories				

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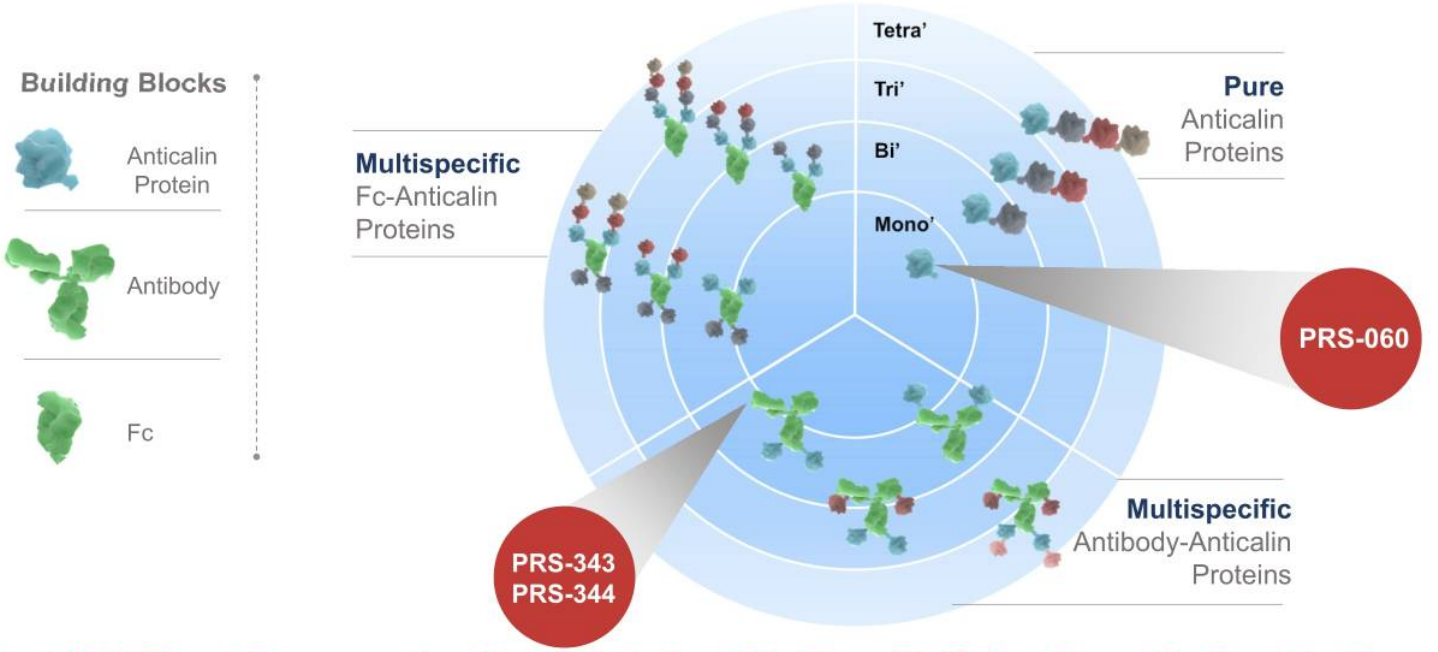
Key Value Driver:
Unique Formatting of Anticalin Protein-Based Drugs



Potent Multi-Target Engagement • Novel Inhaled and Multispecific MoA • Favorable Drug-like Prope

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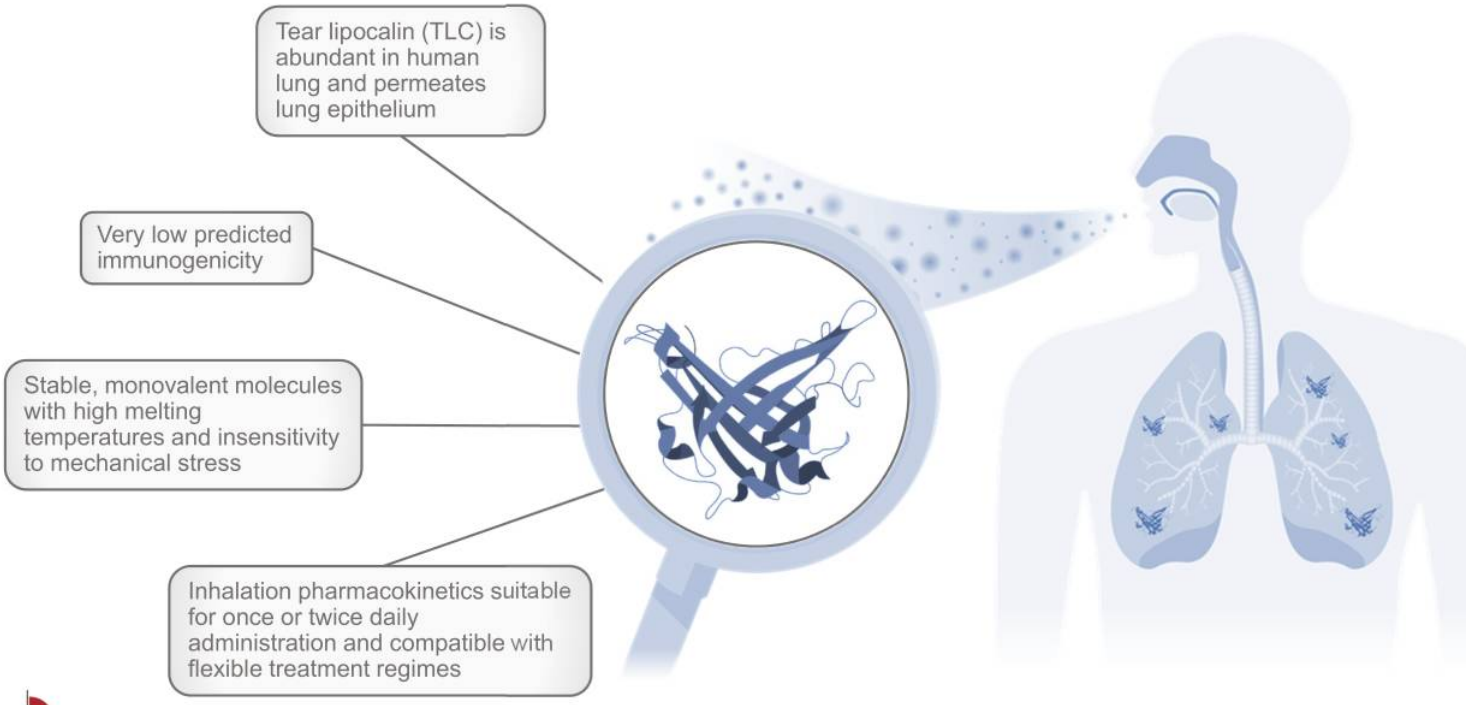
Anticalin Technology Advantages: Differentiated Respiratory Platform



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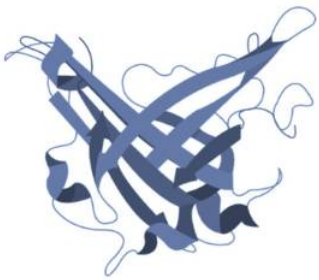
PRS-060: IL-4Rα Antagonist

Candidate	PRS-060
Function/MoA	Inhibiting IL4-Rα (disrupts IL-4 & IL-13 signaling)
Indications	Moderate-to-severe asthma
Development	Phase 1 multiple-ascending dose trial ongoing
Commercial Rights	Co-development and U.S. co-commercialization rights, including gross margin share

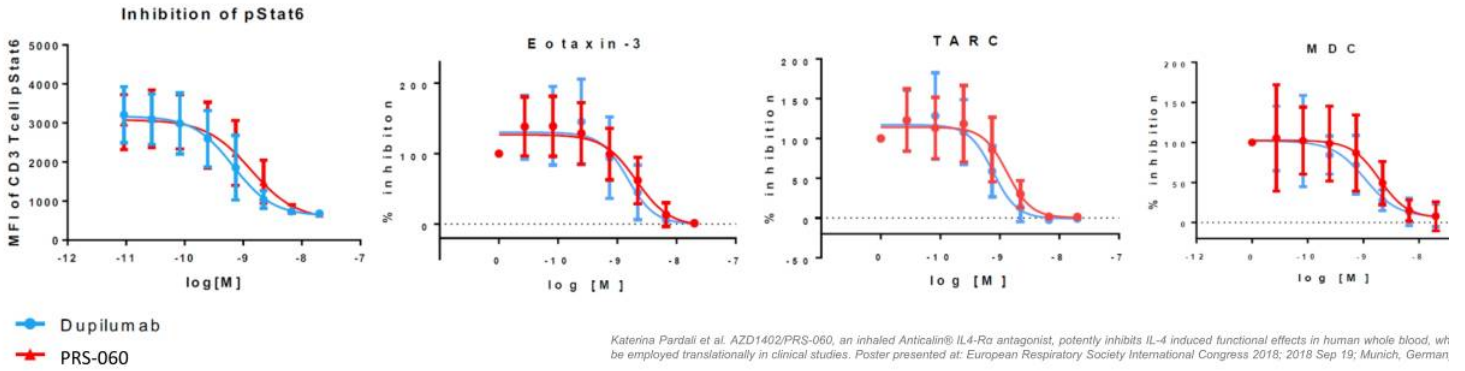


PRS-060

PRS-060's Potency is Similar to that of Dupilumab

PRS-060 reduces levels of pSTAT6, eotaxin-3, TARC and MDC in a comparable manner to dupilumab

Drug	IC_{50} [nM] pSTAT6	IC_{50} [nM] Eotaxin-3	IC_{50} [nM] TARC	IC_{50} [nM] MDC
PRS-060	1.3	2.1	1.3	2.0
Dupilumab	0.8	1.5	0.8	1.1



Katerina Pardali et al. AZD1402/PRS-060, an inhaled Anticalin® IL4-Rα antagonist, potently inhibits IL-4 induced functional effects in human whole blood, wh be employed translationally in clinical studies. Poster presented at: European Respiratory Society International Congress 2018; 2018 Sep 19; Munich, German

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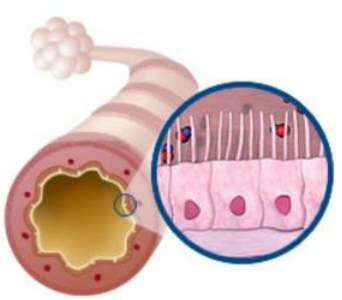
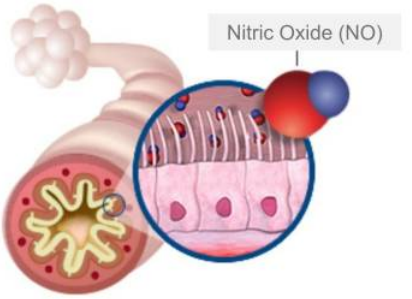
FeNO is a Validated Biomarker in Allergic Asthma Interventions

Elevated fractional exhaled nitric oxide (FeNO) is a marker of allergic asthma



Normal epithelial cells release minimal NO



During airway inflammation, activated epithelial cells increase production of NO

Biologics that have demonstrated a meaningf reduction in FeNO (dupilumab, tezepeluma have subsequently produced clinicall significant improvements in lung function ar superior exacerbation improvements versu drugs that had no on effect FeNO

Dupilumab was recently approved by the EM for severe asthma in patients with either hig eosinophils (EOs) or high FeNO

We are exploring FeNO reduction versu placebo in a multi-dose ascending phase study of PRS-060

Positive FeNO data from this study wou support continued development to assess th potential to improve lung function (FEV1) uncontrolled asthmatics

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PRS-060 Phase I Multiple Ascending Dose Trial

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

*q.d. on D

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

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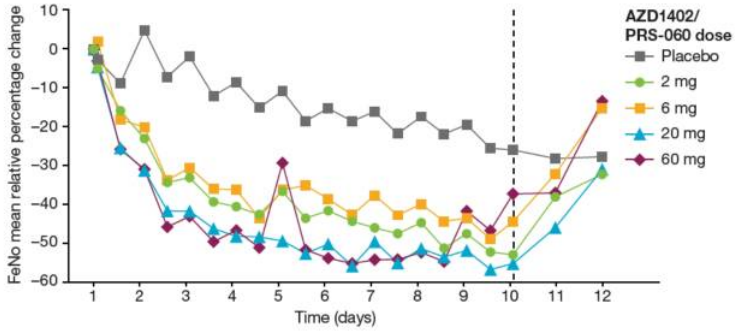
Phase 1b Interim Results: Robust FeNO Reduction

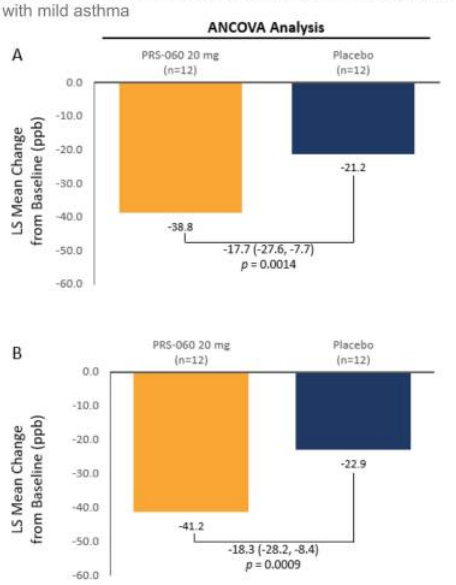
PRS-060 Relative FeNO Reduction (Emax Analysis)



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		

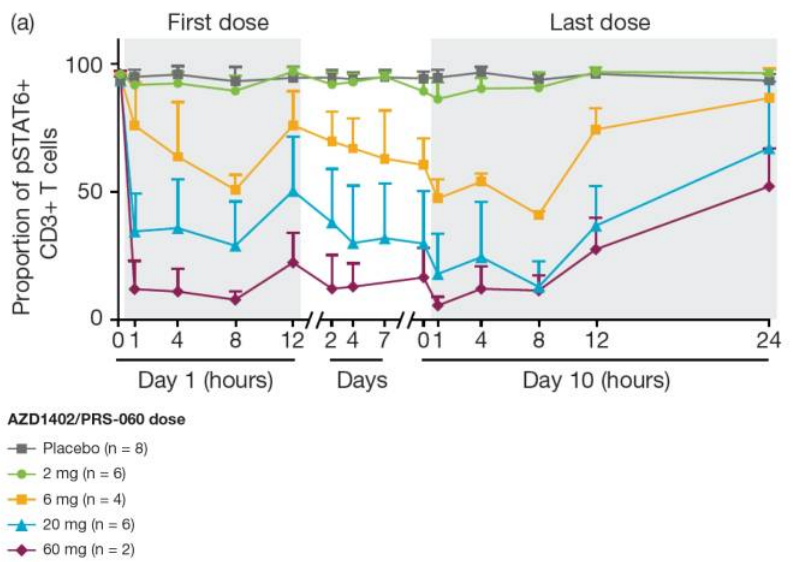
PRS-060 Relative FeNO Reduction (ANCOVA Ana

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



Phase 1b Interim Results: Pharmacological Versatility

pSTAT6 levels over time following inhalation of PRS-060



No systemic target engagement a minimal systemic exposure w observed at the 2mg dose, suggesti that local target engagement by the dr is sufficient to reduce airw inflammation

Pharmacological versatility, given lo dose FeNO reduction with no observ systemic activity (pSTAT6) versus high-dose FeNO reduction with systen activity

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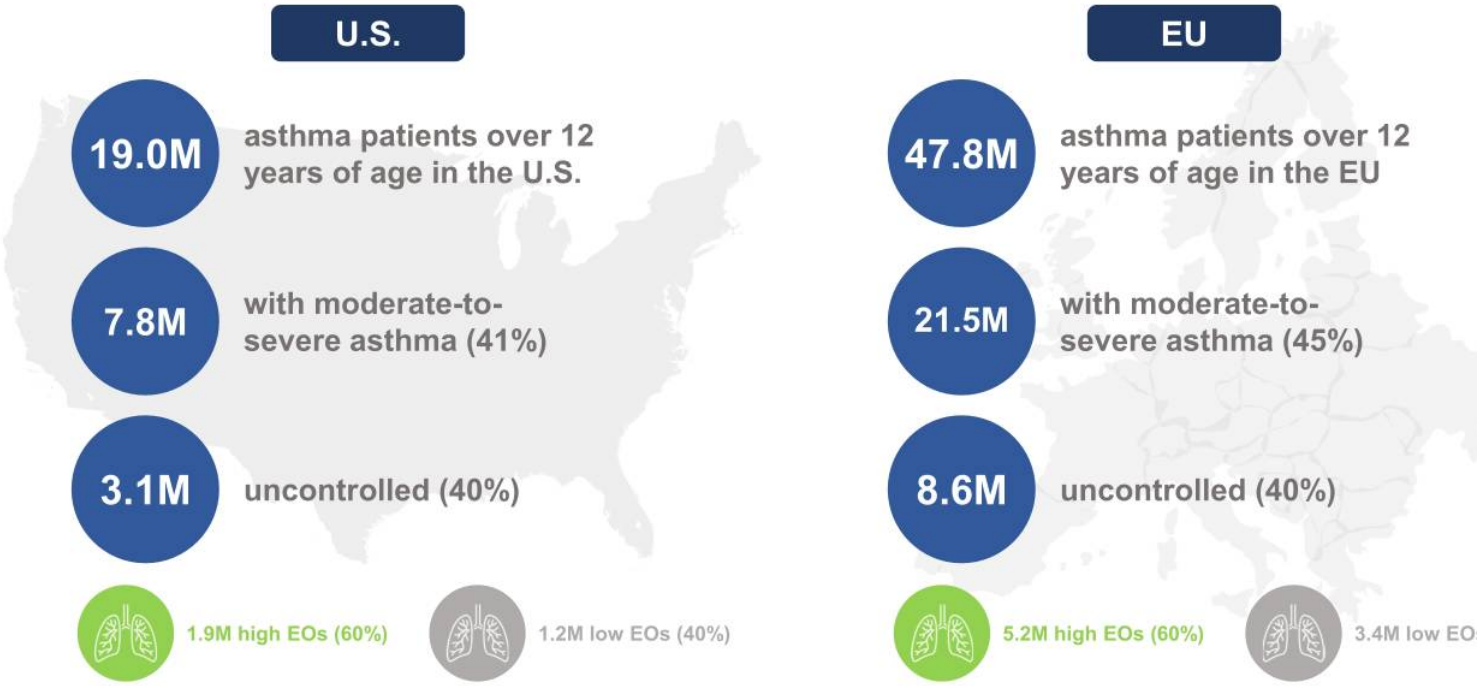
Moderate-to-Severe Asthma Market Opportunity



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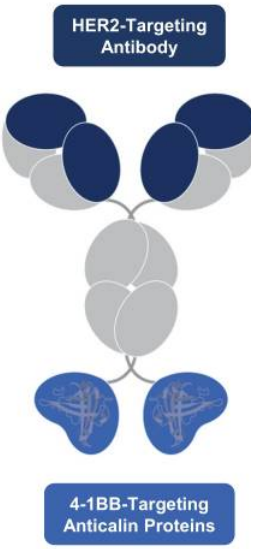
All numbers reflect 2016 estimates.
Source: Artisan Healthcare Consulting analysis, including the following: CDC, Eurostat, Rabe (2004), Cazzoletti (2007), Colice (2012), Hekking (2015).

PRS-343: 4-1BB/HER2 Bispecific

Candidate	PRS-343
Function/MoA	Tumor-targeted 4-1BB agonism and HER2 antagonism
Indications	HER2+ solid tumors
Development	Phase 1 ongoing (mono and combo)
Commercial Rights	Fully proprietary



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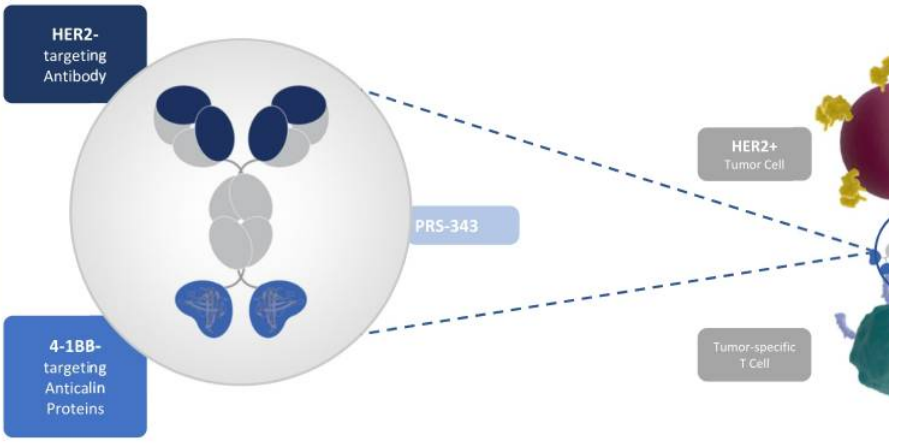
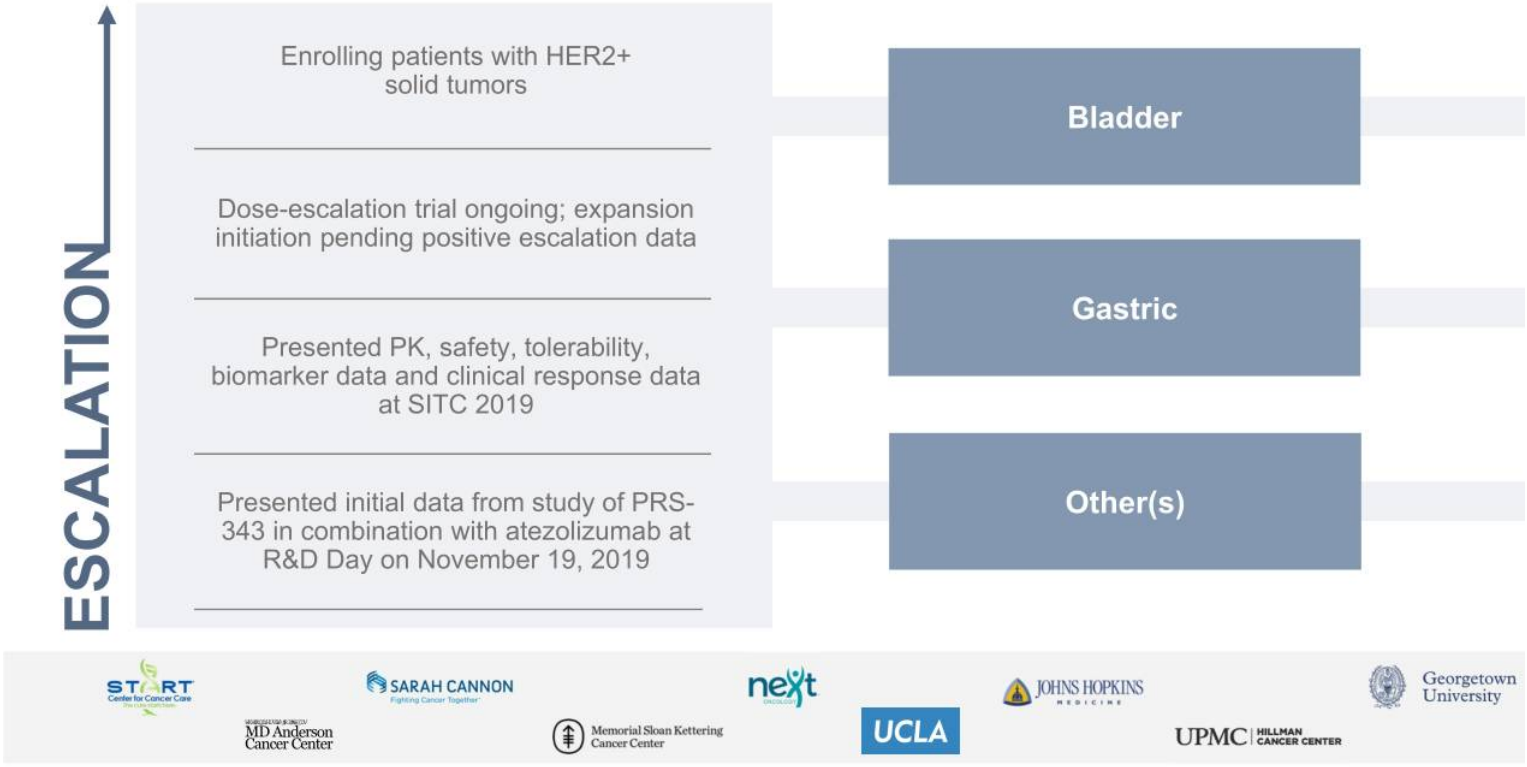
PRS-343: Modes of Action

HER2-targeting moiety of the drug localizes to the tumor microenvironment and facilitates 4-1BB cross-linking

4-1BB cross-linking ameliorates T-cell exhaustion and is critical for T-cell expansion



PRS-343 Phase 1 Escalation and Expansion Trials



START Center for Cancer Care
SARAH CANNON Fighting Cancer Together
next ONCOLOGY
JOHNS HOPKINS MEDICINE
Georgetown University
MD Anderson Cancer Center
Memorial Sloan Kettering Cancer Center
UCLA
UPMC | HILLMAN CANCER CENTER

Study Design

Primary Objectives

- Characterize safety profile
- Identify MTD or RP2D

Secondary Objectives

- Characterize PK profile
- Investigate dosing schedule
- Assess potential immunogenicity and PD effects
- Investigate efficacy

Active schedules

Schedule 1: Q3W dosing on Day 1

Schedule 2 : Q2W dosing on Days 1, 15

Current Enrollment

Dose Level	No. Patients	Dose (mg/kg
1	1	0.0005 (Q3W
2	1	0.0015
3	1	0.005
4	2	0.015
5	2	0.05
6	5	0.15
7	7	0.5
8	6	1
9	6	2.5
10	9	5
11	7	8
11b	6	8 (Q2W)
Total	53	

Data cut-off: 23-Oct-19 for subjects up to Cohort 11b; additional cohorts enrolling

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Treatment-Related Adverse Events

Cohorts 9-11b

TRAE	Number (%)	Grade 3 (%)
Infusion related reactions	6 (9%)	2 (3%)
Nausea and vomiting	8 (12%)	0
Chills	5 (8%)	0
Arthralgias	4 (6%)	1 (2%)
Flushing	4 (6%)	3 (5%)
Decreased appetite	3 (5%)	0
Hypotension	3 (5%)	1 (2%)
Increased Lipase	3 (5%)	1 (2%)
Non cardiac chest pain	3 (5%)	1 (2%)

No Grade 4 or 5 Treatment-Related AEs

Data cut-off: 23-Oct-19 for subjects up to Cohort 11b; additional cohorts enrolling

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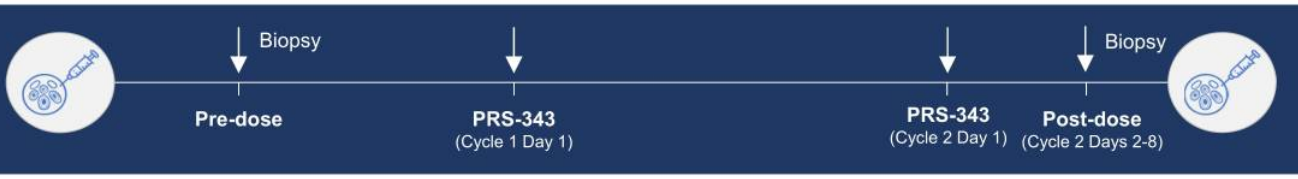
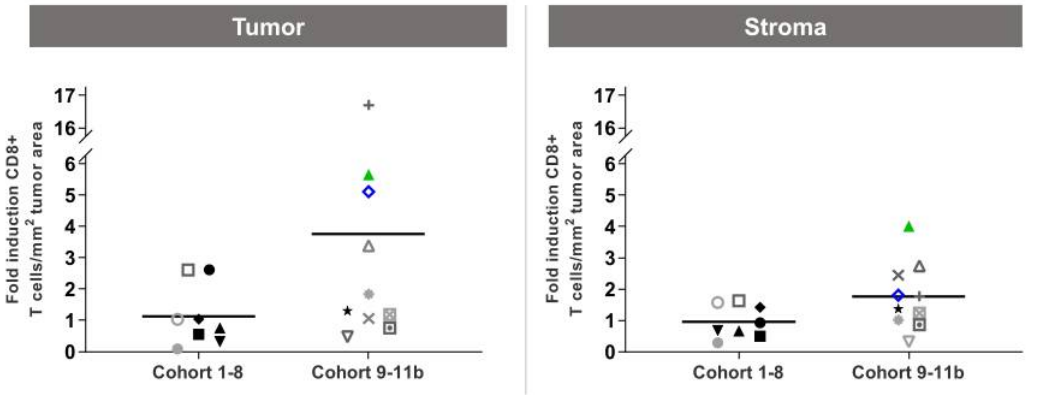
Increased CD8+ T Cell Numbers in Tumor Biopsies Post-Treatme





Data cut-off: 23-Oct-19 for subjects up to Cohort 11b; additional cohorts enrolling

Pronounced increase in CD8+ T cel
numbers is observed post-treatmer
patients receiving doses ≥ 2.5 mg/k

Patients benefiting from treatment
> 120 days (blue) and PR (green) h
more pronounced increase in CD8+
cell number in tumor vs. stroma

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Summary of Responses at Active Dose Range of PRS-343

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

Cohort	11b	11	10	9	Total
Best Response	8 mg/kg, Q2W	8 mg/kg, Q3W	5 mg/kg, Q3W	2.5 mg/kg, Q3W	
Response Evaluable Patients	5	4	4	5	18
PR	2	-	-	-	2
SD	3	2	1	2	8
PD	-	2	3	3	8
ORR	40%	0%	0%	0%	11%
DCR	100%	50%	25%	40%	55%

Data cut-off: 23-Oct-19 for subjects up to Cohort 11b; additional cohorts enrolling

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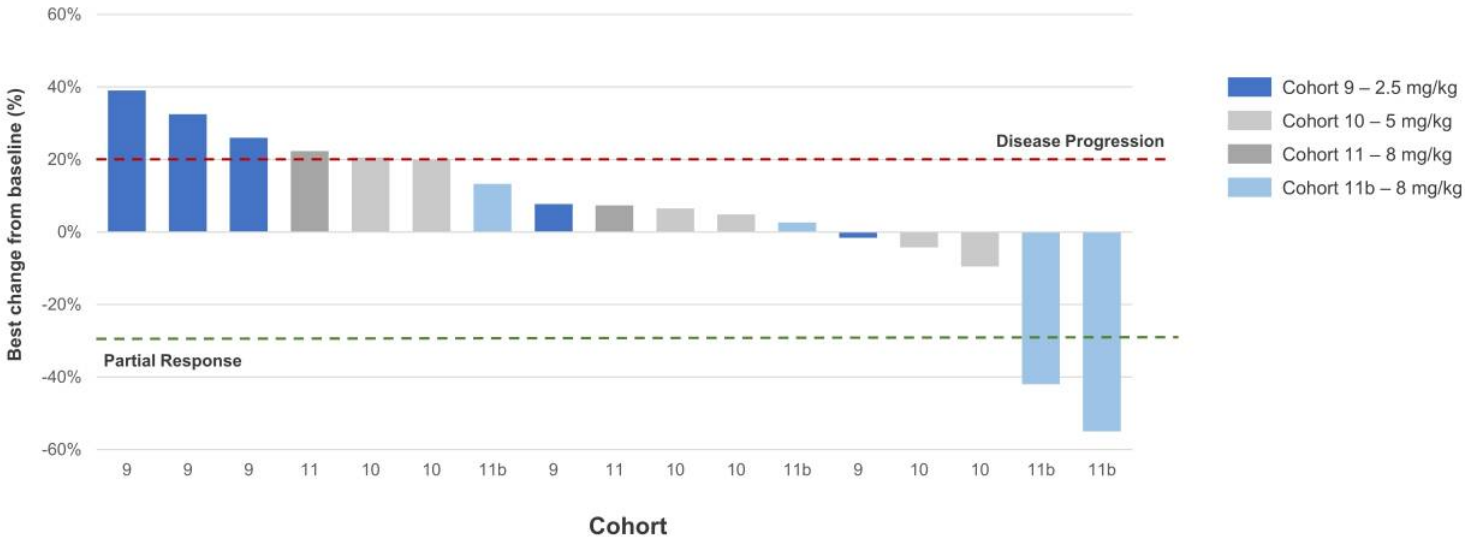
Best Response in Target Lesions Cohorts 9-11b



Data cut-off: 23-Oct-19 for subjects up to Cohort 11b; additional cohorts enrolling

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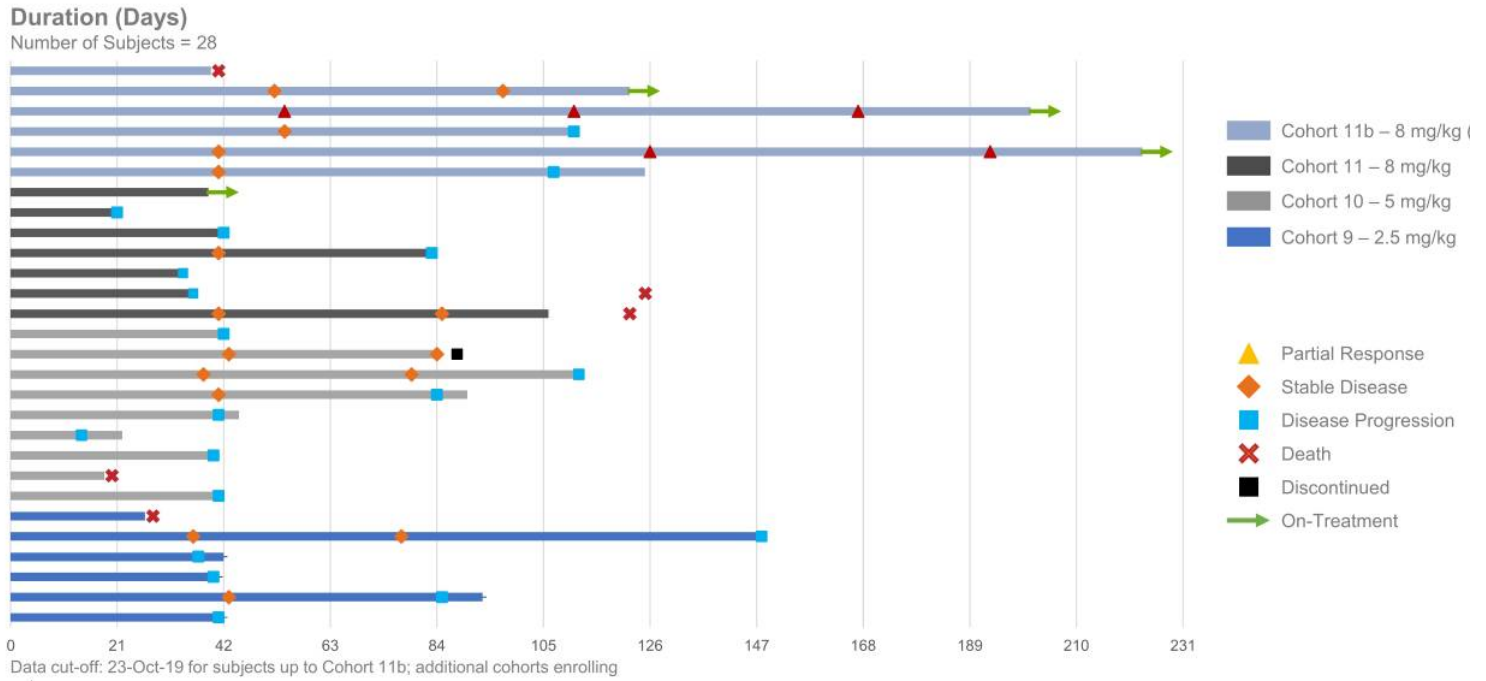
Average Time on Treatment with PRS-343
Significantly Increases in Cohort 11b (8 mg/kg Q2W)



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Case Study #1: Gastric Cancer Patient with Confirmed Partial Respo

Patient Profile, Treatment History and Treatment Outcome

Patient Profile

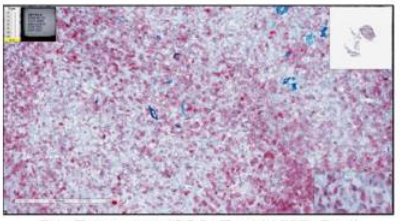
- Cohort 11b | 8 mg/kg every two weeks
- 80-year old woman; initial diagnosis in June 2017
- Stage IV gastric adenocarcinoma
- Metastases to liver, lymph node and adrenal glands
- HER2 IHC 3+; PD-L1 positive (CPS=3)
- NGS: ERBB2 amplification, TP53 mutation, alteration of CDK12 and SF3B1

Oncology Treatment History	Duration	Best Re
Trastuzumab, Pembrolizumab + Capecitabine/oxaliplatin	July 2017 – June 2018	Stable
Nivolumab with IDO1 inhibitor (investigational drug)	Aug 2018 – Jan 2019	Stable

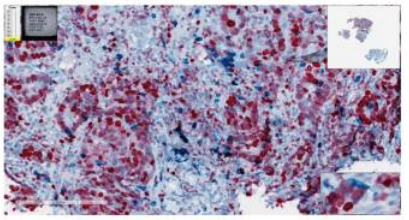
Lesions	Lesion Site	Lesion Size (mm)				
		Baseline	C2 Post-treatment	C3 Post-treatment	C4 Post-treatment	C6 Post-treat
Target 1	Liver	14	12	10	9	9
Target 2	Liver	20	16	10	8	8
Target 3	Pancreas	19	16	14	14	14
% Change from Baseline			-17%	-36%	-42%	-42%
Non-target 1	Lung	Present	Present	Present	Present	Present
Non-target 2	Stomach	Present	Present	Present	Present	Absent
Non-target 3	Stomach	Present	Present	Present	Present	Absent

PR, partial response; HER2, human epidermal growth factor receptor 2; PD-L1, Programmed Death Ligand 1; CPS, combined positive score; NGS, next-generation sequencing
Data cut-off: 23-Oct-19

CD8+ T Cell Numbers Increase Post-Treatment in Responding Gastric Cancer Patient



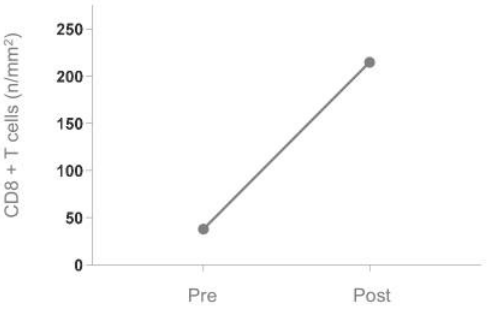
Pre-Treatment (CD8: Teal | Ki67: Red)



Post-Treatment (CD8: Teal | Ki67: Red)

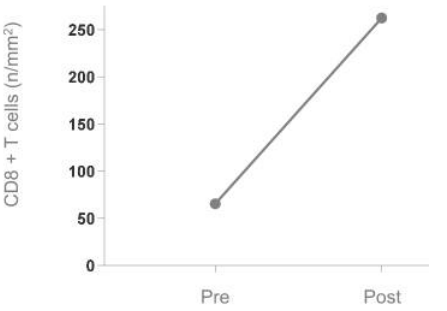
Tumor

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



Stroma

CD8 fold change: **4** CD8 pre [n/mm²]: **6**



CD8+ T cell numbers increase post-treatment. This is more pronounced in tumor tissue and consistent with the predicted MoA of PRS-343.

–pieris–

Data cut-off: 23-Oct-19

Case Study #2: Fallopian Tube Cancer Patient with Partial Resp
Patient Profile, Treatment History and Treatment Outcome

Cohort 11b
8 mg/kg PRS-343 (Q2W)

- 59 year old female, initial diagnosis on September 19, 2017
- Fallopian tube carcinoma
- ERBB2 2+; MSI stable; TMB 4 Muts/Mb; PDL-1 status not known
- CD8 fold change in tumor: Not known as multiple post-treatment core biopsies did not contain cancer cells

Oncology Treatment History	Duration	Best Response
Taxol/Carboplatin	October 2017 - November 2017	Stable Disease
Taxotere/Carboplatin	December 2017 - May 2018	Stable Disease
Doxil	October 2018 – February 2019	Progressive Disease

Lesions	Lesion Site	Lesion Size (mm)			
		Baseline	C2 Post-treatment	C4 Post-treatment	C6 Post-trea
Target 1	Liver – Dome of left lobe	18	10	12	8
% Change from Baseline			-44%	-33%	-55%

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Data cut-off: 23-Oct-19

Case Study #3: Urothelial Cell Carcinoma Patient with Stable Disease
Patient Profile, Treatment History and Treatment Outcome

Cohort 9
2.5 mg/kg PRS-343 (Q3W)

- 92 year old male, initial diagnosis in August 2015
- Urothelial cell carcinoma Stage 3
- HER2 FISH positive; MSS; TMB high16 mut/Mbp
- CD8 fold change in tumor: 5.1

Oncology Treatment History	Duration	Best Response
Cisplatin + gemcitabine	September 2015 – September 2015	Toxicity
Carboplatin + gemcitabine	October 2015 – December 2015	Progressive Disease
Atezolizumab	December 2016 – June 2017	Stable Disease
MEDI-0562 + durvalumab	August 2017 – May 2018	Stable Disease

Lesions	Lesion Site	Lesion Size (mm)			
		Baseline	C2 Post-treatment	C4 Post-treatment	C6 Post-trea
Target 1	Left para-aortic lymph node	27	24	24	25
Target 2	Right para-aortic lymph node	17	18	18	18
Target 3	Paraesophageal lymph node	18	19	19	20
% Change from Baseline			-1.6%	-1.6%	1.6%

–pieris–

Data cut-off: 23-Oct-19

PRS-343-Atezolizumab Combination Trial

Primary Objectives

- Characterize safety profile of PRS-343 in combination with atezolizumab
- Identify MTD or RP2D for PRS-343 in combination with a fixed dose of atezolizumab

Secondary Objectives

- Characterize PK profile
- Investigate dosing schedule
- Assess potential immunogenicity and PD effects
- Investigate efficacy

Dosing schedule | Q3W dosing on Day 1

Dose Level	Number of Patients Enrolled	PRS-343 Dose (mg/kg)	Atezolizun
1	3	0.05	120
2	1	0.15	120
3	2	0.5	120
4	3	1.0	120
5	8	2.5	120
6	9	5.0	120
7	9	8.0	120

–pieris–

Data presented at R&D Day in New York on November 19, 2019.

Baseline Characteristics (Combination Trial)
All Subjects (n = 35)

Characteristic	n (%)
Age, Median (range)	59 (26-87)
Gender	
Female	19 (54%)
Male	16 (46%)
ECOG PS	
0	10 (29%)
1	25 (71%)
Prior Therapy Lines	
1	6 (17%)
2	5 (14%)
3	3 (9%)
4	6 (17%)
5+	15 (43%)

Primary Cancer Type	n (%)
Breast	12 (34%)
Gastroesophageal	6 (17%)
Colorectal	5 (14%)
Gallbladder/ Biliary	4 (11%)
Lung	3 (9%)
Gynecological	2 (6%)
Bladder	1 (3%)
Carcinoma of Unknown Primary	1 (3%)
Pancreatic	1 (3%)

Data presented at R&D Day in New York on November 19, 2019.

Treatment-Related Adverse Events (Combination Trial)
Cohorts 4-7

TRAE	n = 85	% Grade 3
Infusion related reaction	17 (20%)	
Nausea and Vomiting	7 (9%)	
Diarrhea	6 (7%)	1 (1%)
Fatigue	6 (7%)	
Rash	4 (5%)	
Anemia	3 (4%)	1 (1%)
Chills	2 (2%)	
Decreased appetite	2 (2%)	
Dizziness	2 (2%)	
Dysgeusia	2 (2%)	
Malaise	2 (2%)	
Myalgia	2 (2%)	
Neutrophil count decreased	2 (2%)	1 (1%)
Platelet count decreased	2 (2%)	1 (1%)
Pyrexia	2 (2%)	
White blood cell count decreased	2 (2%)	1 (1%)

No Grade 4 or 5 PRS-343 Treatment-Related AEs

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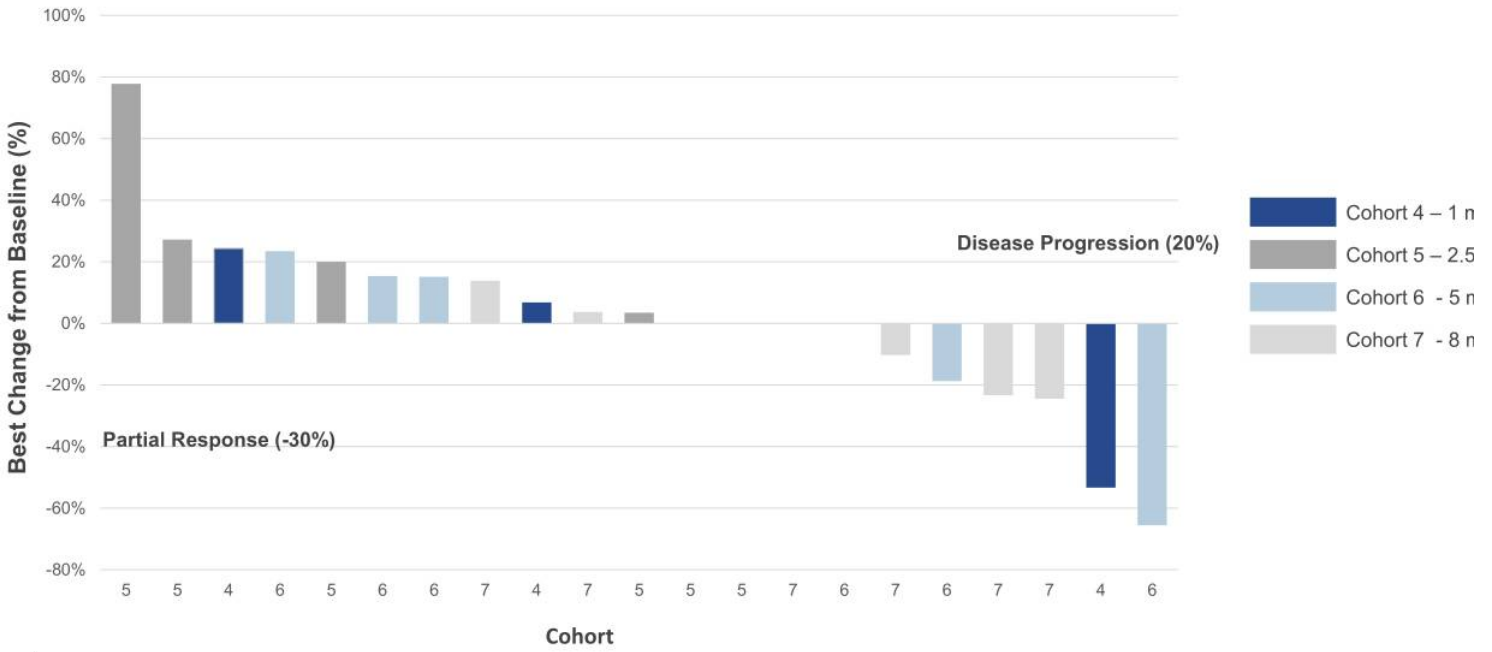
Data presented at R&D Day in New York on November 19, 2019.

Best Response in Target Lesions (Combination Trial)
Combination Study Cohorts 4-7 (n = 21)



Data presented at R&D Day in New York on November 19, 2019.

Case Study #1: Breast Cancer Patient with Partial Response

Patient Profile and Treatment History

Cohort 4
1 mg/kg PRS-343 (Q3W) +
atezolizumab 1200 mg

- 64 year old female, initial diagnosis October 16, 2000
- Stage 4 breast carcinoma
- ER/PR-; HER2 3+ (IHC biopsy collected in Jan 2010), FISH+
- PD-L1, MSI and TMB status not known
- CD8 fold change in tumor: 8.5

Oncology Treatment History	Duration	Best Response
AC X4, tamoxifen (X1 yr), arimidex (X5 yrs)	2000-2006	Stable Disease
Carboplatin/Taxotere then Taxotere/Herceptin then Xeloda/ Lapatinib then Herceptin/ Navelbine	May 2006 – September 2009	Complete Response
Vinorelbine and Herceptin	February 2010 – May 2011	Unknown
Trastuzumab/Lapatinib Ditosylate (Tykerb)	May 2011 – May 2012	Progressive Disease
Trastuzumab/Gemzar	May 2012 – Feb 2013	Unknown
ADT (TDM1, Kadcyla)	May 2013 – Jun 2015	Stable Disease
Trastuzumab/Pertuzumab (Perjeta)	Sep 2017 – Dec 2017	Stable Disease
ADT (TDM1, Kadcyla)	Dec 2017 – Jul 2018	Stable Disease
Trastuzumab/Capecitabine (Xeloda)	Aug 2018 – Jan 2019	Stable Disease

–pieris–

Data presented at R&D Day in New York on November 19, 2019.

Case Study #1: Breast Cancer Patient with Partial Response

Treatment Outcome

Lesions	Lesion Site	Lesion Size (mm)					
		Baseline	C2 Post-treatment	C4 Post-treatment	C6 Post-treatment	C8 Post-treatment	C12 Post
Target 1	Sub-cranial lymph node	15	8	5	8	8	
Target 2	Right neck lymph node	15	9	7	7	6	
% Change from Baseline			-43%	-60%	-50%	-53%	-6

–pieris–

Data presented at R&D Day in New York on November 19, 2019.

Case Study #2: Breast Cancer Patient with Stable Disease
Patient Profile, Treatment History and Treatment Outcome

Cohort 6
5 mg/kg PRS-343 (Q3W) + atezolizumab 1200 mg

- 53 year old male, initial diagnosis July 28, 2011
- Stage 4 invasive ductal breast carcinoma (metastatic to mediastinal lymph nodes, bones and lung)
- ER+/PR-, HER2- (IHC), FISH+ (biopsy collected in March 2019)
- PD-L1, MSI and TMB status not known
- CD8 fold change in tumor: 8

Oncology Treatment History	Duration	Best Response
Trastuzumab + Carboplatin + Docetaxel + Tamoxifen	September 2011 – July 2013	not known
Trastuzumab + Perjeta + Navelbine	August 2013 – January 2016	not known
TDM-1 + Fulvestrant	November 2017 – March 2018	not known
Lapatinib + Capecitabine	March 2018 – March 2019	not known
Anastrozole + Ibrance	April 2019 – May 2019	not known

Lesions	Lesion Site	Lesion Size (mm)			
		Baseline	C2 Post-treatment	C4 Post-treatment	C6 Post-trea
Target 1	Lymph node	16	18	15	13
% Change from Baseline			+13%	-6%	-19%

–pieris–

Data presented at R&D Day in New York on November 19, 2019.

Case Study #3: NSCLC Patient with Partial Response
Patient Profile, Treatment History and Treatment Outcome

Cohort 6
5 mg/kg PRS-343 (Q3W) +
atezolizumab 1200 mg

- 65 year old male, initial diagnosis Feb 6, 2018
- Stage 4 NSCLC squamous
- Foundation One HER2 amplification
- CD8 fold change in tumor: Results to be presented

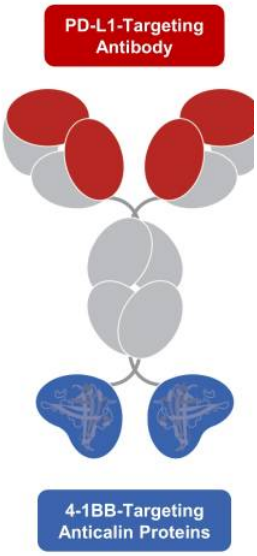
Oncology Treatment History	Duration	Best Response
Carboplatin/paclitaxel + RT	March 2018 – April 2018	Partial Response
Atezolizumab	August 2018 – May 2019	Stable Disease (treatment ended upon c progression)

Lesions	Lesion Site	Lesion Size (mm)		
		Baseline	C2 Post-treatment	C4 Post-treatm
Target 1	Lung	42	26	20
Target 2	Lung	16	0	0
% Change from Baseline			-55%	-66%
Non-target 1	Lung	Present	Absent	Absent
Non-target 2	Lung	Present	Present	Absent

Data presented at R&D Day in New York on November 19, 2019.

PRS-344: 4-1BB/PD-L1 Bispecific

Candidate	PRS-344
Function/MoA	Localized 4-1BB agonism with PD-L1 antagonism
Indications	N.D.
Development	1H20 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



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Financial Overview (As of 9/30/19)

$86.2* M	$0.0	49.4** M
Cash & Cash Equivalents	Debt	CSO

$120+ M non-dilutive capital since January 2017

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* excludes $32M of gross proceeds from Nov '19 private placement
** following Nov '19 private placement, CSO + "toothless" preferred = ~70.0 M shares

Catalysts

2019 Milestones

- **Respiratory:** Inhaled IL4-Rα antagonist (PRS-060)
  - ✓ SAD phase 1 data at ATS 2019
  - ✓ MAD phase 1 data, including FeNO reduction vs. placebo, at ERS 2019
- **IO:** 4-1BB/HER2 bispecific (PRS-343)
  - ✓ Monotherapy phase 1 data at SITC 2019
  - ✓ Initial combination phase 1 data at R&D Day

2020 Catalysts

- **Respiratory:**
  - ❑ PRS-060 phase 2a trial initiation
  - ❑ Data and rationale for advancement into IND-enabling studies for wholly-owned inhaled program
- **IO:**
  - ❑ PRS-343 complete monotherapy phase 1 escalation data
  - ❑ PRS-343 complete combination with atezolizumab phase 1 escalation data
  - ❑ PRS-343 phase 1 expansion initiation
  - ❑ PRS-344 IND 1H2020

-pieris-

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