## 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 9, 2017

## PIERIS PHARMACEUTICALS, INC.

(Exact Name of Registrant as Specified in its Charter)

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

255 State Street, 9th Floor
Boston, MA 02109
United States
(Address of principal executive offices, including zip code)

Registrant's telephone number, including area code: 857-246-8998

ck the appropriate box below if the Form 8-K filing is intended to simultaneously satisfy the filing obligation of the registrant under 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))

#### Item 7.01 Regulation FD Disclosure.

Attached hereto as Exhibit 99.1 and incorporated by reference herein is a corporate presentation of Pieris Pharmaceuticals, Inc.

The information set forth under this "Item 7.01. Regulation FD Disclosure," including the exhibits attached hereto, shall not be deemed "filed" for purposes of Section 18 of the Securities Exchange Act of 1934, as amended, nor shall it be deemed incorporated by reference into any filing under the Securities Act of 1933, as amended, except as shall be expressly set forth by specific reference in such filing.

#### **Item 9.01 Financial Statements and Exhibits**

- (d) Exhibits.
- 99.1 Corporate Presentation of Pieris Pharmaceuticals, Inc., dated January 2017.

### **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.

Dated: January 9, 2017 PIERIS PHARMACEUTICALS, INC.

By: /s/ Darlene Deptula-Hicks

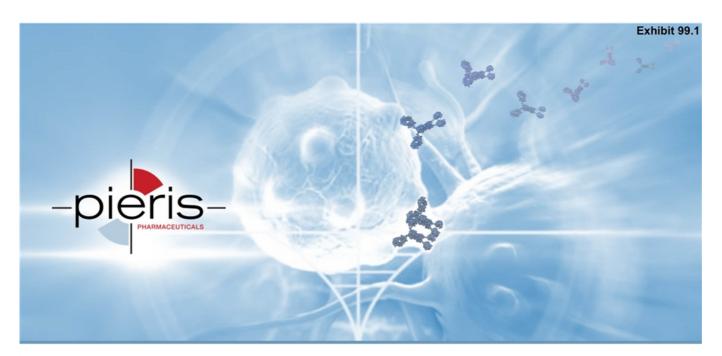
Name: Darlene Deptula-Hicks

Title: SVP and Chief Financial Officer

## EXHIBIT INDEX

Exhibit No. Description

99.1 Corporate Presentation of Pieris Pharmaceuticals, Inc., dated January 2017.



## Pieris Pharmaceuticals, Inc. Nasdaq:PIRS

**Corporate Presentation January 2017** 

## **Forward Looking Statements**



Statements in this presentation that are not descriptions of historical facts are forward-looking statements that are based on management's current expectations and assumptions and are subject to risks and uncertainties. In some cases, you can identify forward-looking statements by terminology including "anticipates," "believes," "can," "continue," "could," "estimates," "expects," "intends," "may," "plans," "potential," "predicts," "projects," "should," "will," "would" or the negative of these terms or other comparable terminology. Factors that could cause actual results to differ materially from those currently anticipated include, without limitation, risks relating to the results of our research and development activities, including uncertainties relating to the discovery of potential drug candidates and the preclinical and clinical testing of our drug candidates; the early stage of our drug candidates presently under development; our ability to obtain and, if obtained, maintain regulatory approval of our current drug candidates and any of our other future drug candidates; our need for substantial additional funds in order to continue our operations and the uncertainty of whether we will be able to obtain the funding we need; our future financial performance; our ability to retain or hire key scientific or management personnel; our ability to protect our intellectual property rights that are valuable to our business, including patent and other intellectual property rights; our dependence on third-party manufacturers, suppliers, research organizations, testing laboratories and other potential collaborators; our ability to successfully market and sell our drug candidates in the future as needed; the size and growth of the potential markets for any of our approved drug candidates, and the rate and degree of market acceptance of any of our approved drug candidates; developments and projections relating to our competitors and our industry; our ability to establish collaborations; our expectations regarding the time which we will be an emerging growth company under the JOBS Act; our use of proceeds from this offering; regulatory developments in the U.S. and foreign countries; and other factors that are described more fully in our Annual Report on form 10-K filed with the SEC on March 23, 2016. In light of these risks, uncertainties and assumptions, the forward-looking statements regarding future events and circumstances discussed in this report may not occur and actual results could differ materially and adversely from those anticipated or implied in the forward-looking statements. You should not rely upon forward-looking statements as predictions of future events. The forward-looking statements included in this presentation speak only as of the date hereof, and except as required by law, we undertake no obligation to update publicly any forward-looking statements for any reason after the date of this presentation to conform these statements to actual results or to changes in our expectations.

## **Expanding the Playing Field for Therapeutic Proteins**



Novel Drug Class

## Anticalins® – A Novel Therapeutic Protein Drug Class

- · Fully proprietary and unique
- · Excellent drug-like properties and clinical validation

Novel Modes of Action

### Multiple Paths for Success & Risk Diversification

- Potentially transformative immuno-oncology (IO) multispecifics
  - TME-targeted T cell agonists / Multi-checkpoint blockade
- Inhalation a topical approach to asthma may bring enormous benefits

Validation and Growth Capital

### Partnerships and Capital to Pursue Clinical-based Inflection Points

- Transformative IO partnership with Servier brings significant upfront payment, fully retained US rights on several novel multispecific drug candidates
- \$2.5 B in biodollar potential across Large Pharma partnerships + royalties
- \$60+ million in cash on hand after Servier upfront provides runway into 2019 through key value inflection points on fully proprietary pipeline
  - PRS-343 (IO): first-in-patient trial initiation 1H17; PRS-060 (asthma): first-in-man trial initiation mid '17; PRS-080 (anemia): multi-dose trial read-out (hemoglobin) 2H17









Non-Confidential

3

## Servier Immuno-Oncology Partnership pierisis a Transformative Strategic Alliance





## Strategic Alliance Highlights

- IO co-development alliance with ~\$30M upfront, up to \$1.8B in potential milestones and low double-digit royalties
- 5 committed IO bispecifics, including PRS-332 (PD-1-based bispecific)
  - Potential to expand to 3 additional bispecific programs
  - Retained co-development and full US commercial rights on PRS-332 and up to 3 additional programs
- · A "True Partnership" equal voice with a collaborator having a shared strategic vision and resources to develop several novel IO bispecifics

## Strategic Implications of Partnership

- · Underscores the value of Pieris' powerful multispecifics platform in IO
- Strengthens cash position to fund development of proprietary product pipeline, while extending financial runway into 2019, through several clinical-stage value inflection points
- Fully retained rights on lead IO bispecific, PRS-343 (4-1BB/HER2), and ability to enter into additional partnerships

## Diversified Immuno-Oncology (IO) and Non-IO Product Pipeline



#### **IMMUNO-ONCOLOGY PROGRAMS**

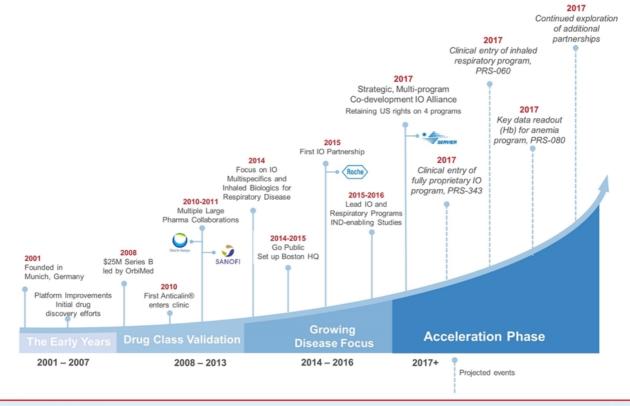
Candidate	Target	Indication	Partner	Our Commercial Rights		IND- enabling	Phase I	Phase Ib/IIa
PRS-343	4-1BB/HER2 Bispecific	Ю		Worldwide				
PRS-342	4-1BB/GPC3 Bispecific	Ю		Worldwide				
PRS-300s	n.d.	Ю		Worldwide				
PRS-332	PD-1/n.d. Bispecific	Ю	* = SERVIER	U.S.				
Servier 4 Programs	n.d./n.d. Bispecific	Ю	* = SERVIER	U.S. / Milestones & Royalties				
Roche	n.d.	10	Roche	Milestones & Royalties				

#### RESPIRATORY, ANEMIA AND OTHER DISEASE AREAS

Candidate	Target	Indication	Partner	Our Commercial Rights	Preclinical	IND- enabling	Phase I	Phase Ib/IIa
PRS-080	Hepcidin	Anemia		Worldwide				
PRS-060	IL4Ra	Asthma		Worldwide				
DS-9001	PCSK9	Dyslipidemia	Dalichi-Sanlyo	Milestones & Royalties				
Daiichi Sankyo	n.d.	n.d.	Dulichi-Saniyo	Milestones & Royalties				
Sanofi	P. aeruginosa	Infectious disease	SANOFI	Milestones & Royalties				
PRS-110	cMet	Oncology	Zydus	Major Markets				

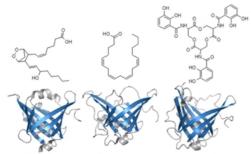
## **Entering an Acceleration Phase**



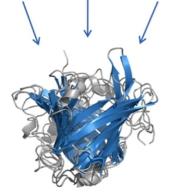


## **Anticalin® Drug Class Origins**





3 of 12 human lipocalins and endogenous ligands



Overlay of several lipocalin X-ray structures

- Anticalins<sup>®</sup> are recombinantly engineered human lipocalins
  - Lipocalins are non-immunogenic, extracellular binding proteins
  - Lipocalins have very low sequence identity, yet structural conservation among the 12 known human members is the foundation of the scaffold
- Monomeric, stable, low molecular weight (~18 kDa)
- Phage display-based drug discovery platform

## **Anticalins® Share Several Features with mAbs yet are Highly Differentiated**

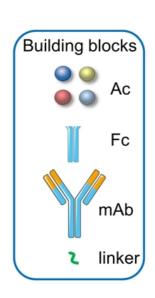


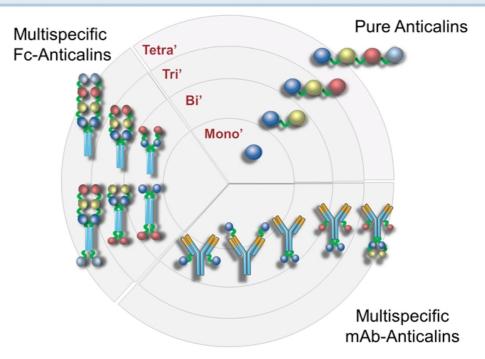
- Monoclonal Antibodies (mAbs) are highly successful drugs
- Anticalins share many of the beneficial properties of mAbs yet are highly differentiated

Differentiating Features	Antibody	Anticalin	
Human-derived	V	$\sqrt{}$	
Natural binding molecule	<b>√</b>	V	
Non-immunogenic	V	1	
High affinity and specificity	$\checkmark$	√	
Systemic delivery	$\checkmark$	$\checkmark$	
Tunable pharmacokinetics	(√)	$\checkmark$	
Valent- and geometry-versatile multispecifics		$\checkmark$	
Inhalable		$\checkmark$	
Protein class exclusivity		$\checkmark$	
Positive freedom to operate landscape		$\checkmark$	
Safety Related Efficacy Related	IF	P Related	

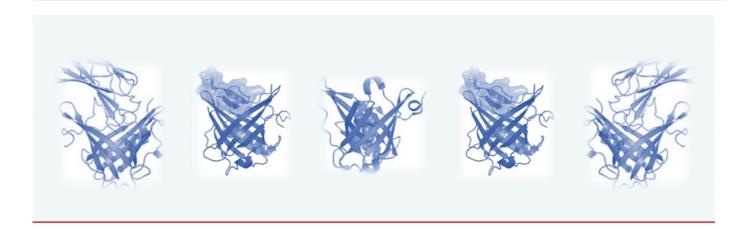
## Valent- and Geometry-Versatile Multispecifics to Achieve Optimal Biology







Potent Multi-target Engagement | Novel MoA | Excellent Drug-like Properties



## **Anticalins® in Immuno-Oncology**

Differentiation Through Unique Multispecific Formats

## **Next-Generation I-O Therapy Strategy**



- Engage immune costimulatory targets in highly novel, targeted manner with unique multispecifics, led by PRS-343 (wholly owned by Pieris)
  - Establish superior therapeutic window over mAbs
  - Improve on benefits of leading checkpoint antagonists and other therapies
- Simultaneously block multiple immune checkpoints in one drug built on key backbone components (e.g. PD-1), led by PRS-332 (partnered with Servier)
  - Demonstrate superiority to existing PD-1 mAbs
  - Exploit independent and fully proprietary PD-1 position
- Demonstrate intra-pipeline synergy between targeted costimulatory engagement and multi-checkpoint blockade within own pipeline
  - 4-1BB (CD137) activation combined with PD-1 blockade expected to result in greater tumor growth inhibition than either monotherapy in preclinical studies<sup>1</sup>

Next-Generation IO Therapies:

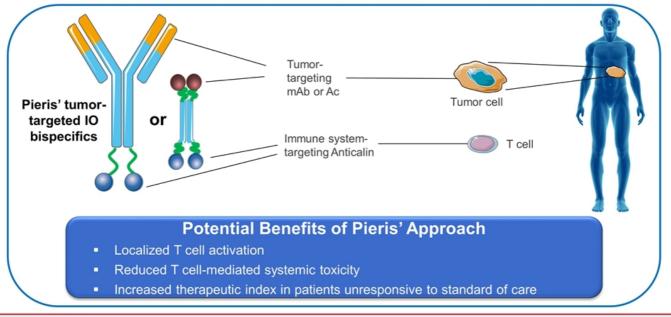
Novel multispecifics, novel combinations, wholly owned

<sup>1</sup> Shindo, Y et al., Anticancer Res. 2015 Jan;35(1):129-36

## Lead IO Program (PRS-343) Addresses \_pieris-Biology Challenging for Antibodies Alone

## The Challenges of Agonistic mAb Approaches

- Inconsistent agonistic activity (e.g. urelumab vs. utomilumab)
- Systemically agonizing mAbs have resulted in narrow therapeutic window due to cytokine storm (urelumab, TGN1412)

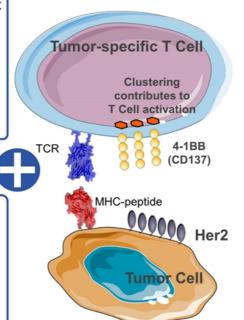


## PRS-343 is a First-in-Class TME-activated Co-stim Agonist



## 4-1BB (CD137) - Key Costimulatory Target

- Marker for tumor-specific T cells in TME
- Ameliorates T cell exhaustion
- Critical for T cell expansion
- Induces anti-tumor cytolytic activity
- Drives central memory T cell differentiation for sustained response



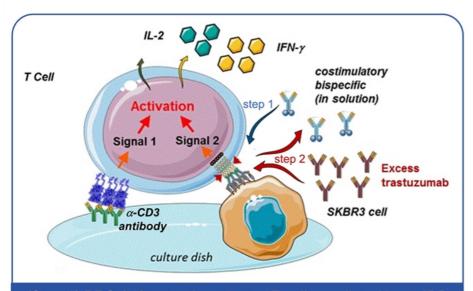


## **HER2** – Strongly Validated Tumor Target

- Restricted expression on normal tissue
- Multiple HER2+ tumors with high-unmet need
  - Breast, Gastric, Esophageal, Colorectal, Biliary, Pancreas, Bladder, Ovarian, Endometrial, Lung (AdenoCa), Salivary Duct, Head/Neck
- Mediates drug mobilization and immune receptor activation within the tumor bed

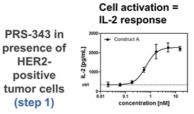
## **PRS-343 Demonstrates Targeted T Cell Activation Ex Vivo**



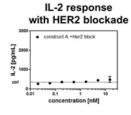


(Step 1) PRS-343 potently activates T cells mediated by 4-1BB cross-linking upon binding to HER2-positive tumor cells (SKBR3)

(Step 2) Addition of excess HER2-targeting trastuzumab prevents PRS-343 binding to HER2-positive cells and results in a loss of activity, as intended, confirming mode of action



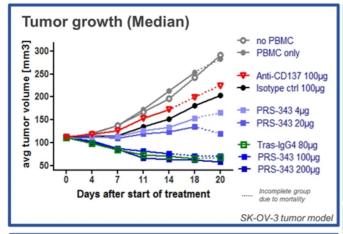
PRS-343 in solution, following addition of excess trastuzumab (step 2)

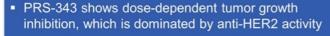


## **PRS-343 Shows Bifunctional Activity –**

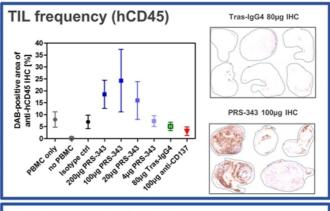
**Dose-dependent Tumor Growth Inhibition & CD8(+)TIL Expansion in SK-OV-3 Model** 

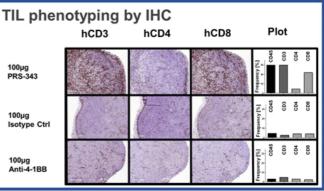






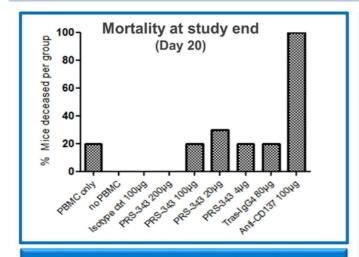
- PRS-343 leads to strong and dose-dependent lymphocyte infiltration in tumors; monospecific anti-HER2 mAb (IgG4 backbone) lacks this activity
- Monospecific anti-4-1BB benchmark mAb shows insignificant response compared to isotype control and no significant tumor infiltration of lymphocytes



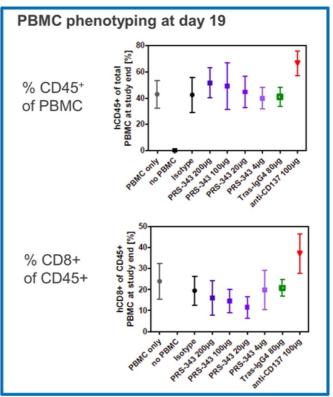


## PRS-343 Repeatedly Demonstrates Differentiation Over anti-HER2 and 4-1BB mAbs





- Anti-CD137 benchmark mAb shows accelerated GvHD with significant mortality at day 20 in line with literature data<sup>2</sup>
- Toxicity corresponds with expansion of CD8-positive T cells in PBMC for this group

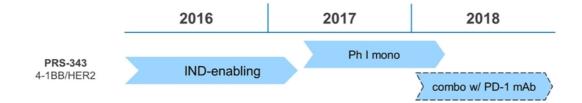


<sup>1</sup> GvHD = graft vs host disease

<sup>&</sup>lt;sup>2</sup> Sanmamed et al., Cancer Res. 2015 Sep 1;75(17):3466-78.

## PRS-343: IND Enabling Activities on pieris-Track to Support a FIM in H1 2017





## **Targeted Indication Characteristics**

### **Known Immune Component**

- Existing tumor-infiltrating lymphocyte (TIL) repertoire
- Validated role of CD137

## **High Medical Need**

HER2 Patient Populations unresponsive to or relapsed from standard of care

### **Straightforward Registration Path**

Manageable trial size and duration with clear endpoints



**Priority Patient Populations** 

## **PRS-343: Summary and Milestones**



## ■ Differentiated profile vs HER2- and 4-1BB-directed benchmark mAbs

- PRS-343 has dual functionality based on monospecific HER2-targeting and bispecific, tumor-localized costimulation of 4-1BB.
  - Potential for synergistic anti-tumor activity
    - Anti-HER2 mediated tumor growth inhibition
    - 4-1BB-mediated anti-tumor T cell activation
  - Potential to avoid undesirable peripheral T cell activation (reduced systemic side effects)

### Excellent drug-like properties

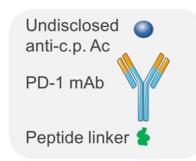
- Antibody-like half-life in mice and cynomolgus monkey
- Low immunogenicity risk (ex vivo Lonza Epibase® test)
- High titers at GMP stage (1000L) and excellent stability

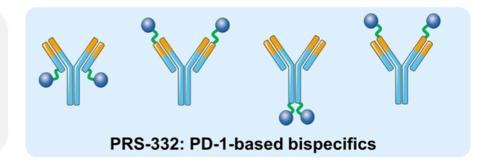
## Near-term clinical-stage milestones

- First-in-patient clinical trial initiation planned for 1H17
  - · HER2+ solid tumor patients unresponsive to SOC
- · Data-driven focus on high unmet need tumors, e.g. gastric, bladder and breast
- Combination trial with PD-1 mAb planned for 2018

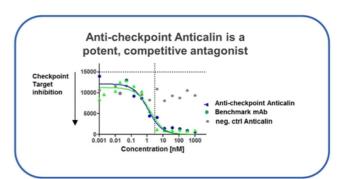
## PRS-332: Novel PD-1-based IO Bispecific -\_pieris-**Co-Developed by Pieris & Servier**

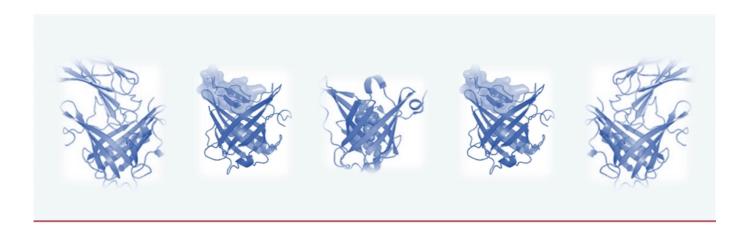






- Bispecific protein comprising proprietary Anticalin & novel inlicensed PD-1 mAb
- Several bispecific permutations under preclinical evaluation
- Future combination with PRS-343



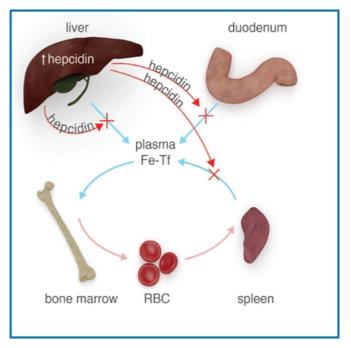


## **Anticalins in Anemia and Asthma**

## PRS-080 Potently Neutralizes Hepcidin, The Master Regulator of Iron Metabolism



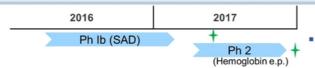
- Hepcidin is a peptide hormone that serves as a key regulator of iron metabolism by regulating iron entry into plasma from the three main sources of iron:
  - Dietary absorption in the duodenum
  - Release of recycled iron from macrophages
  - Release of stored iron from hepatocytes
- Chronic inflammation drives increased hepcidin production
  - Prevents transferrin-mediated transport to the bone marrow for erythropoiesis
  - Causes anemia of chronic disease
  - "functional" iron deficiency (FID) vs absolute iron deficient anemia
- PRS-080 is a pegylated Anticalin that binds with high affinity and neutralizes Hepcidin

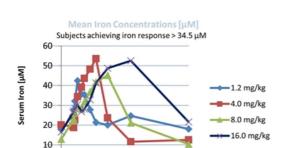


Haematologica 2013 98:11

## **PRS-080 Drives Iron Mobilization in** Healthy Subjects; Ongoing Development - Pierisin FID ESRD Patients







-0

40

Time after start of infusion [hours]

-60

- Excellent Ph I results (ASH 2015)
  - Safe, well tolerated in HV (36 drug + 12 placebo)
  - Mode of action (iron mobilization) confirmed
    - Increase in serum iron mobilization (p = 0.005)
- First-in-patient trial (ESRD) ongoing
  - Single Ascending Dosing completion expected end of Jan 2017
  - Drug well tolerated Encouraging activity
  - Disclosing unblinded data by end of Q2 17
- Multi-dose trial initiation expected April 2017
  - Hemoglobin (Hb), reticulocyte concentration of Hb as endpoints
  - Disclosing data in 2H 17
- First Anticalin projected to achieve clinical Proof of Concept (increased hemoglobin)
- Will address FID anemia patients poorly responsive to ESAs and iron therapies
  - Within ESRD, among highest economic burden patient population
  - Est. 90k patients in the US and 80k patients in JP

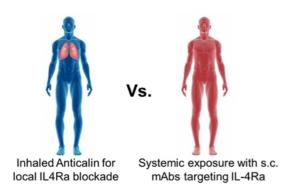
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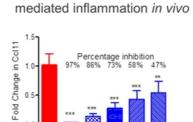
Significant Commercial opportunity

+ = report data

## PRS-060: First-in-Class Inhaled IL4Ra Antagonist For Uncontrolled Asthma







50μg

- 0.5 -

Treat: Veh

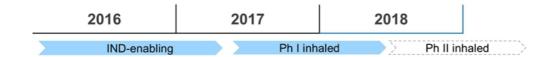
Pre (hr): -

PRS-060 inhibits IL4Ra-

- First inhaled biologic to potently engage highly validated asthma target (IL4Ra)
  - IL4Ra is a critical target in uncontrolled asthma
  - Target engagement on lung tissue is a key differentiator over SQ injected mAbs
  - Potential low-dose, low-COGs alternative to mAbs
- Preclinical *In-vivo* POC for pulmonary delivery
- Formulability for pulmonary delivery

## PRS-060: Phase 1 to start mid 2017 Convenient Formulation, Large Addressable Market Pieris





- First-in-man study initiation planned for mid 2017
- Targeted uncontrolled asthma population of ~20M patients world-wide

#### RATIONALE AND ADVANTAGES:

### Clear Biology Rationale with Manageable Development Path

- Validated target in inflammation associated with uncontrolled asthma
- Clear biomarker strategy and pathway to clinical PoC & Registration

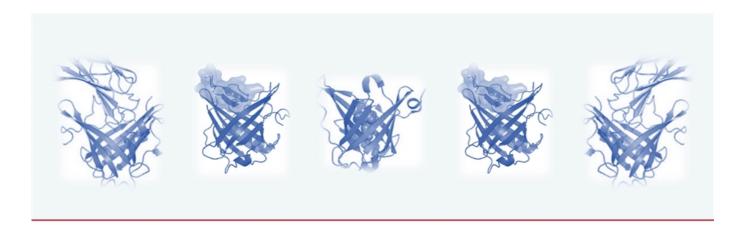
### **Potential Manufacturing advantages:**

- Low manufacturing cost
- Highly potent drug requiring reduced drug concentration

### Patient- and Physician-friendly

- Locally inhaled to increase patient convenience
- Primary care physicians not as comfortable with IV and SQ injections

# Antibodies **Anticalins**



## Corporate – Financials – Goals – Accomplishments

## **Expanding the Playing Field for Therapeutic Proteins**



Novel Drug Class

## Anticalins® – A Novel Therapeutic Protein Drug Class

- · Fully proprietary and unique
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## Novel Modes of Action

#### Multiple Paths for Success & Risk Diversification

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## **Management and Board Profile**



### Senior Management Team



Stephen Yoder, J.D.

President & CEO

morphosus



Louis Matis, M.D.

SVP, Chief Development Officer



NIH NATIONAL CANCER INSTITUTE



#### **Darlene Deptula-Hicks**

SVP, Chief Financial Officer

MICROLINE.





Claude Knopf SVP, Chief Business Officer

Baxalta
U NOVARTIS



#### **Board of Directors**

#### Stephen Yoder

President & CEO

## Chau Khuong (Chairman)

Partner, OrbiMed Advisors

#### Michael Richman

CEO, NextCure, Inc. Amplimune, Chiron, MedImmune, Macrogenics

#### Steven Prelack

SVP, COO, VetCor Velquest Corp., Galectin Therapeutics, BioVex Group

#### Jean-Pierre Bizzari, M.D.

Director Celgene, Servier, Rhone-Poulenc, Sanofi-Aventis

#### Julian Adams, PH.D.

Director
Infinity, Millennium Pharm.,
LeukoSite Inc.

#### **Christopher Kiritsy**

CEO, Arisaph Pharmaceuticals Kos Pharmaceuticals

## Financial Highlights - As of 9/30/16



Cash & Cash Equivalents*	\$36.6M			
Total Debt	\$0.0M			
Revenue Since Inception (license & collaborations)	\$54.0M			
Grant Revenue Since Inception	\$14.2M			
9 Months 2016 Net Loss	(\$16.2M)			
9 Months 2016 Cash Burn (less cash received from PIPE financing & Roche Up Front payment)	\$14.5M			
Common Shares Outstanding	43.1M			
Preferred Shares Outstanding (as converted)	4.9M			
Options Outstanding	4.8M			

<sup>\*</sup> Does not include upfront payment of ~\$ 31.3M from Servier collaboration

## 2016 Achievements and 2017 Expected Milestones



## 2016: Significant Achievements

#### Immuno-Oncology

- ✓ Generated our first PD-1 based bispecific (PRS-332)
- ✓ In vivo POC for 4-1BB bispecific immune costimulatory (PRS-343)
- Progressing PRS-343 trough IND-enabling studies

### Respiratory

 PRS-060 (asthma) through IND-enabling studies

#### Anemia

 Conducting first-in-patient study for PRS-080 in targeted patient population (FID in ESRD)

## 2017: a Year of Transformation

### Immuno-Oncology

- ✓ Cornerstone IO Servier Strategic Alliance including PRS-332. Financial runway into 2019 and leaves PRS-343 unencumbered
- PRS 343: First-in-patient clinical trial initiation planned for 1H17
- Several preclinical-stage, highly differentiated multispecifics

### Respiratory

PRS-060: Initiation of First-in-patient trial Mid-2017

#### Anemia

- PRS-080
  - Phase 1b results disclosure by end of Q2 2017
  - Phase 2a results 2H 2017





## Pieris Pharmaceuticals, Inc.

255 State Street, 9th Floor Boston, MA 02109 USA info@pieris.com www.pieris.com