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

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**FORM 8-K**

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**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 19, 2015**

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

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**Nevada**  
(State of Incorporation)

**333-190728**  
(Commission  
File Number)

**EIN 30-0784346**  
(IRS Employer  
Identification No.)

**Lise-Meitner-Strasse 30**  
**85354 Freising-Weihenstephan, Germany**  
(Address of principal executive offices, including zip code)

**Registrant's telephone number, including area code: +49 81 6114 11400**

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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))
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**Item 7.01 Regulation FD Disclosure.**

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

The information set forth under this “Item 7.01. Regulation FD Disclosure,” including the exhibit 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 Investor Presentation of Pieris Pharmaceuticals, Inc., dated May 19, 2015.

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**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: May 19, 2015

**PIERIS PHARMACEUTICALS, INC.**

By: /s/ Darlene Deptula-Hicks

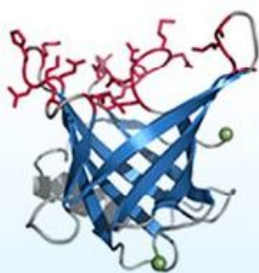
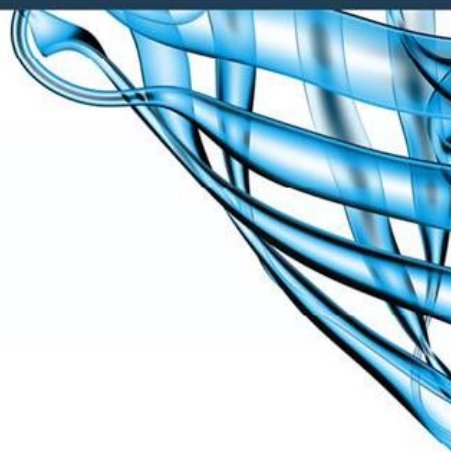
Name: Darlene Deptula-Hicks

Title: Acting Chief Financial Officer

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**EXHIBIT INDEX**

| <b>Exhibit<br/>No.</b> | <b>Description</b>   |
|------------------------|--|
| 99.1                   | Investor Presentation of Pieris Pharmaceuticals, Inc., dated May 19, 2015. |



The Anticalin Company™

Pieris Pharmaceuticals, Inc.  
(OTC:PIRS)

UBS Global Healthcare  
Conference 2015

Stephen S. Yoder  
President & CEO

**May 19, 2015**

# Forward Looking Statements

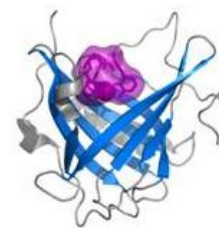


Statements in this presentation that are not descriptions of historical facts are forward-looking statements that are based on management's current expectations and assumptions and are subject to risks and uncertainties. In some cases, you can identify forward-looking statements by terminology including "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 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; competition in our industry; regulatory developments in the U.S. and foreign countries; as well as those risks more fully discussed in the "Risk Factors" section of our Current Report on Form 8-K filed with the SEC on December 18, 2014, the Company's annual report on Form 10-K for the fiscal year ended December 31, 2014, the Company's quarterly reports on Form 10-Q, and the other reports we file with the SEC. 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.

# Pieris Pharmaceuticals, Inc. – The Corporation (OTC:PIRS)



- **Clinical-stage R&D company developing first-in-class biologics**
- **Proprietary Anticalin® technology**
  - Highly differentiated next generation therapeutic proteins
  - Superior drug-like properties
  - Strong patent position and no 3<sup>rd</sup> party IP identified to date for FTO
- **Strong pipeline**
  - Clinical activity, lack of immunogenicity in cancer patients
  - Proprietary pipeline in Immuno-Oncology, Immunology, Anemia and Respiratory
- **Proven track record for successful collaborations with Pharma**



# Pieris Pharmaceuticals, Inc. – The Corporation (OTC:PIRS)



## ▪ Solid Financial Position

- \$43.8M in licensing & milestone payments since inception
- \$14.1M in non-dilutive grants since inception
- \$83.4M total capital raised from investors
- Went public in Dec 2014 through reverse merger
  - Raised gross proceeds of \$13.6M in a private placement transaction - straight common stock at \$2.00
- \$13.2M in cash as of March 31, 2015
- As of 5/12/15, institutional investors collectively owned more than 65% of PIRS common shares - Ally Bridge Group, Forbion Capital, Gilde, GLSV, Lombard Odier, Novo Nordisk, Sphera Funds, Zydus Cadila, and OrbiMed Advisors (23%)

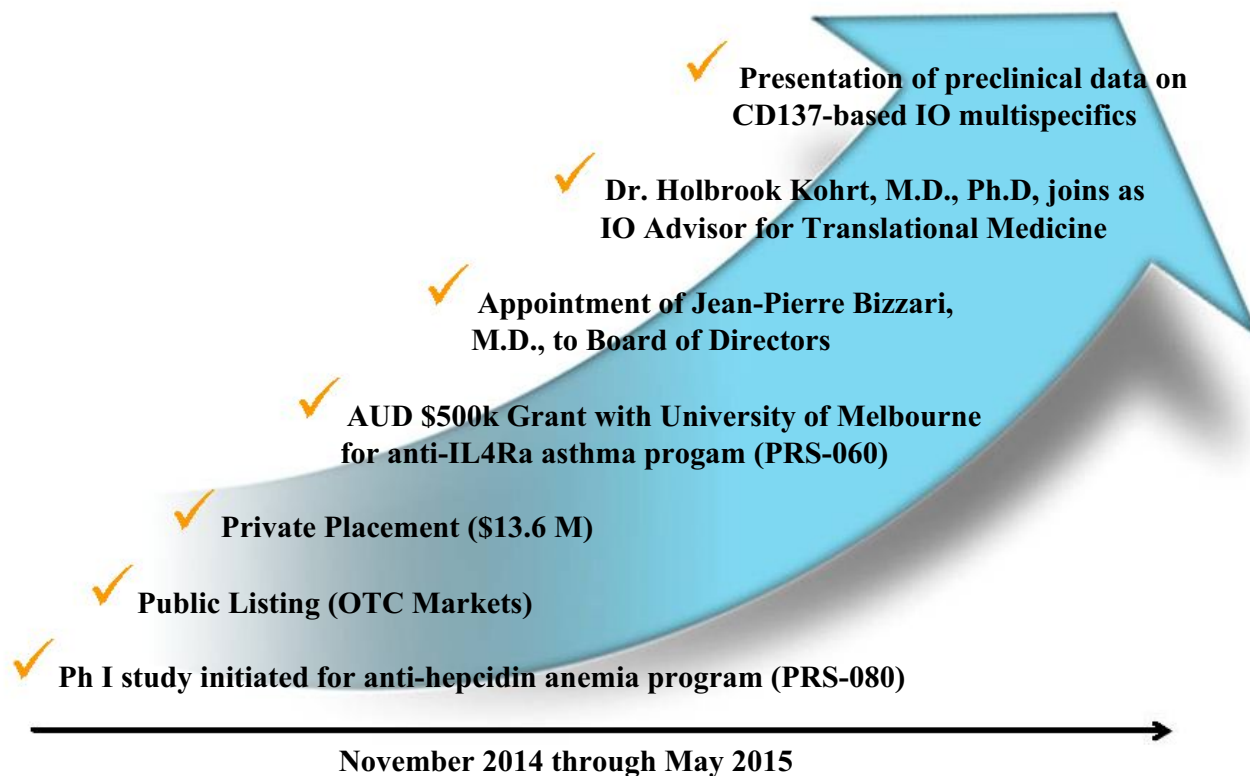


## ▪ Highly experienced leadership team

- CEO, CSO, Head of Discovery, Head of BD formerly at MorphoSys, a German biotech success story with market cap in excess of \$1.5 billion
- Top caliber Board of Directors
  - Former Sanofi, Celgene and Chiron executives; Chairman from OrbiMed



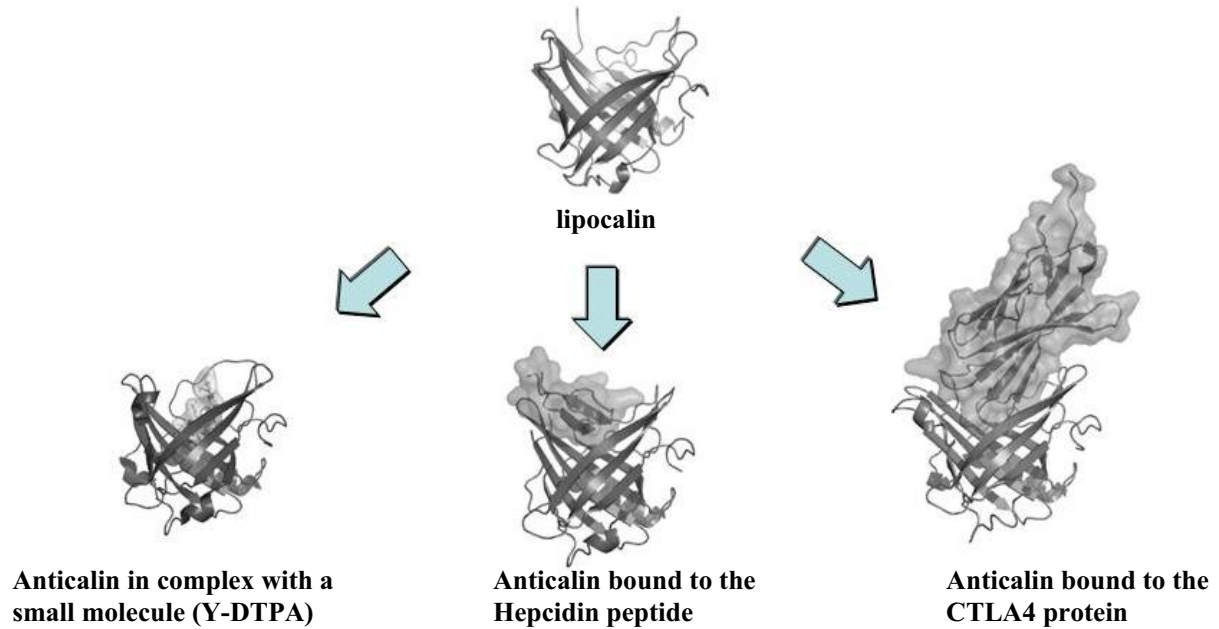
## Recent Key Achievements



# Anticalins are Re-purposed Human Therapeutic Proteins





- Anticalins® are a novel class of therapeutic proteins, derived from lipocalins
  - Small and simple make-up
  - Individual derivatives can be generated that bind to a broad range of targets



# Anticalins Share Several Other 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               | <br>Antibody | <br>Anticalin |
|--|---|--|
| Human-derived                          | ✓   | ✓  |
| Natural binding molecule               | ✓   | ✓  |
| Non-immunogenic                        | ✓   | ✓  |
| High affinity and specificity          | ✓   | ✓  |
| Systemic delivery                      | ✓   | ✓  |
| Tunable pharmacokinetics               |   | ✓  |
| Local delivery (e.g., inhalation)      |   | ✓  |
| Versatile bispecifics & multispecifics |   | ✓  |
| Protein Class Exclusivity              |   | ✓  |
| Positive Freedom to Operate Landscape  |   | ✓  |

Safety Related

Efficacy Related

IP Related

# Commercialization Strategy

Multiple Shots on Goal: Partnered & Proprietary



## Fully Proprietary

### Pieris selects target, funds all costs

- Immuno-oncology, anemia, respiratory: strong networks
- High barriers to entry: e.g. IP, multispecifics, inhalation

## Co-Dev

### Shared investment, shared ownership

- Alternative mechanism to advance several programs
- Retain commercialization rights in major markets

## Fully Partnered

### Partner selects target, funds all costs

- Industry validation
- Cash flow upfront and milestone payments

# Pipeline Overview



|                | Target(s)  | 1° Indication         |  | Discovery | Preclinical | Phase 1 |
|----------------|------------|-----------------------|--|-----------|-------------|---------|
| PRS-080        | Hepcidin   | Anemia                |  |           |             |         |
| PRS-060        | IL4Ra      | Asthma                |  |           |             |         |
| PRS-343        | CD137/HER2 | IO                    |  |           |             |         |
| PRS-300 other  | n.d        | IO                    |  |           |             |         |
| PRS-110        | cMet       | Oncology              |  |           |             |         |
| PRS-NN         | n.d.       | n.d.                  |  |           |             |         |
| PRS-NN         | n.d.       | Ophthalmology         |  |           |             |         |
| PRS-NN         | n.d.       | Ophthalmology         |  |           |             |         |
| Daiichi Sankyo | n.d.       | April 2011 Initiation |  |           |             |         |
| Daiichi Sankyo | n.d.       | April 2011 Initiation |  |           |             |         |
| Sanofi Group   | n.d.       | Sept 2010 Initiation  |  |           |             |         |

n.d. = not disclosed

# Pieris Announced A Novel IO Program on May 19



**For Immediate Release**

## **Pieris Pharmaceuticals to Present Data on Novel Anti-CD137 and HER2 Bispecific Immuno-Oncology Program at UBS Global Healthcare Conference**

**--Company reveals CD137 as a key target in its immuno-oncology franchise --**

**FREISING, GERMANY, May 19, 2015 – Pieris Pharmaceuticals, Inc. (OTCQB: [PIRS](#))**, a biotechnology company advancing its proprietary **Anticalin**<sup>®</sup> biotherapeutic technologies announced today that President and CEO, Stephen Yoder, will present preclinical data on a new immuno-oncology program—an Anticalin-based CD137-HER2 bispecific—at the UBS Global Healthcare Conference at 4:30 pm EDT.

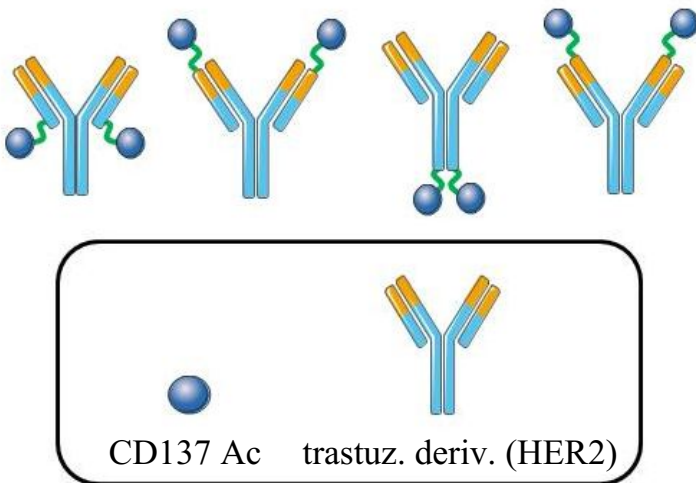
The Company also announced today CD137 as a key target in its immuno-oncology franchise. CD137 is a member of the tumor necrosis factor (TNF) receptor family and is increasingly associated with costimulatory activity for activated T cells, while HER2 is a clinically validated target across a broad spectrum of solid tumors.

# PRS-343: CD137-HER2 Bispecific Member of PRS-300 Series



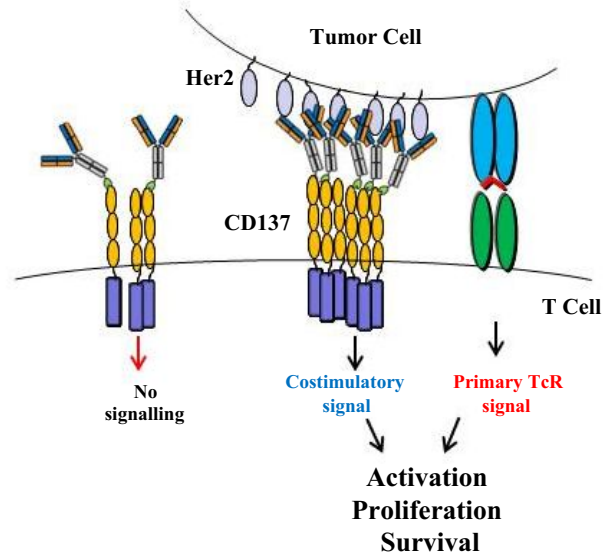
## Protein Engineering Aspects

Several Bispecific Formats  
Under Preclinical Evaluation



## Target Biology Aspects

Perceived costimulatory T cell  
engagement in tumor environment



# CD137 is a TNFR Costimulatory IO Target



- Validated marker for tumor-reactive T cells in man (1)
- Anti-CD137 mAbs improve the expansion of CD8+ melanoma TIL in adoptive T-cell therapy (2)
- In mouse tumor model, forced tumor expression of CD137L (3) or anti-CD137 scFv (4,5,6) leads to tumor elimination in T-cell- and NK-cell-dependent manner
- In clinical CAR-T, inclusion of CD137 downstream signaling has proven key to success
  - CD137 costimulation in T-cells shown to lead to higher persistence, proinflammatory cytokine release and more effective tumor cell killing
  - CD137 costimulation in NK-cells shown to improve therapeutic response in mouse models (7) and currently translated to clinical trials

1 Ye, Q. et al., Clin Canc Res: 2014 Jan 1; 20(1):44-55.

2 Chacon, J. A. et al., PloS One 2013 8(4):e60031.

3 Melero, I. et al., Eur J Immunol 1998 Mar; 28(3):1116-1121.

4 Ye, Z. et al., Nat Med 2002 Apr; 8(4):343-348.

5 Zhang, H. et al., Mol Canc Ther 2006 Jan; 5(1):149-155.

6 Yang, Y. et al., Canc Res 2007 Mar 1; 67(5):2339-2344.

7 Kohrt, H. et al, J Clin Invest. 2012 Mar;122(3):1066-75.



## CD137-Targeting mAbs Struggling To Find a Therapeutic Window



- Several early-stage clinical trials with CD137 mAbs have been terminated
  - Doses of systemic CD137 mAbs required for T cell activation have led to toxicity
- TNFR activation requires receptor clustering
  - Bivalent mAbs shown to depend on Fc receptor interaction (1, 2)
  - Fc receptor interaction is a random process which takes place throughout the body and not just at the tumor
- Most recent trials initiated with CD137 mAbs are focusing on NK cell activation
  - When used at low dose in combination with, e.g., rituximab or cetuximab, may enhance ADCC activity through NK cell activation
  - While this approach may work in defined populations, it may not take full advantage of CD137 role in T cell activation

1 Bulliard, Y. et al., J Exp Med 2013 Aug 26; 210(9):1685-1693

2 Bulliard, Y. et al., Immunol Cell Biol 2014 Jul; 92(6):475-480

## Several Solid Tumors With Upregulated HER2 Expression Not Adequately Addressed with Current Therapies

### ▪ Bladder cancer

- Overexpressed in 36% cases. Her2 is a poor prognostic indicator (1)
- Five-year survival rate is 48% for Her2 negative versus 9.7% for HER2-positive tumors (2, 3)
- Micropapillary urothelial carcinoma subtype. Her2 amplification associated with a three-fold increased risk of death (4)

### ▪ Advanced Gastric Cancer

- Over-expressed in 20% of cases. Overall survival of 14 months (trastuzumab + chemotherapy) (5)

### ▪ Ovarian cancer

- Overexpressed in 20-30% of cases of ovarian cancer
- Her2 is a poor prognostic indicator (Median survival of 15.7 months for HER2-high versus 32.8 months for HER2 normal) (6)

1 Hansel et al, Am J clin Pathology: 2008, 130: 274-281

2 Sato K et al, Cancer: 1992, 70: 2493-9.

3 Scholl et al, Annals of Oncology: 2001, 12: S81-S87

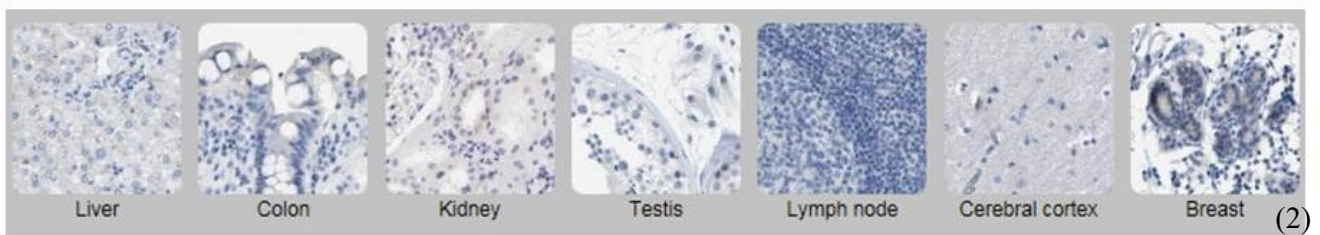
4 Schneider et al, Modern Pathology: 2014, 27: 758-764

5 Bang et al, Lancet: 2010, 28: 687-97

6 Berchuck et al, Cancer Res: 1990, 50:4087-91

## Favorable tissue expression profile for immunotherapy approach

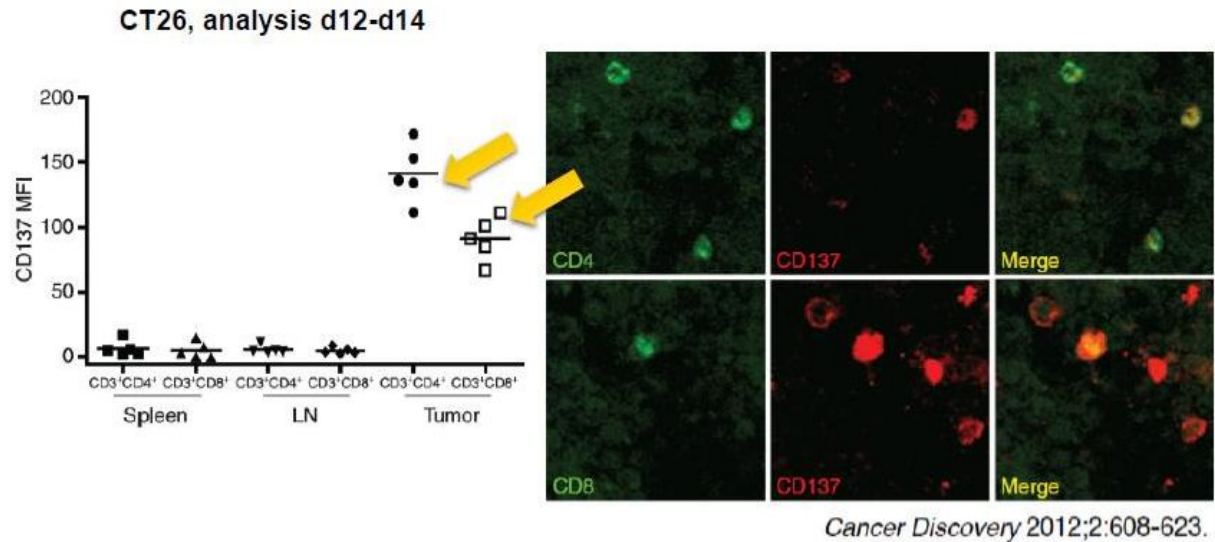
- Low level of HER2 expression on healthy epithelial cells (1)
- Receptor density range observed in tumor tissue will allow Pieris to interrogate the level of expression required for optimal activity



1 Press et al 1990, Oncogene. 5: 953-962

2 Protein Atlas <http://www.proteinatlas.org/ENSG00000141736-ERBB2/tissue>

# CD137 Expression is Localized in Tumor Microenvironment

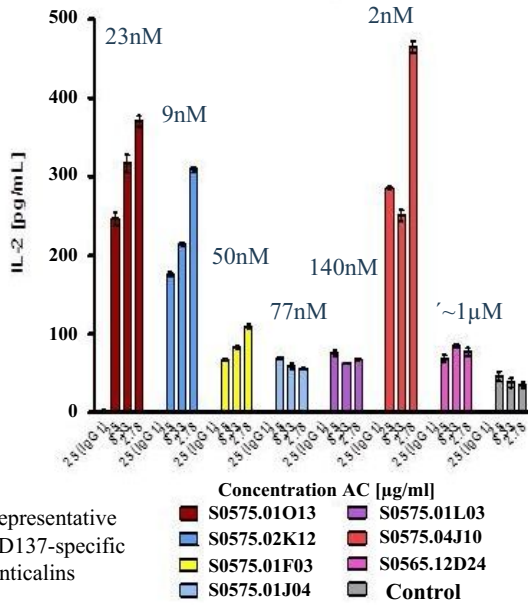


- In tumor models there are high levels of CD137 on intratumoral CD4 and CD8 T cells
- Existing TIL population primed for response to CD137 agonist

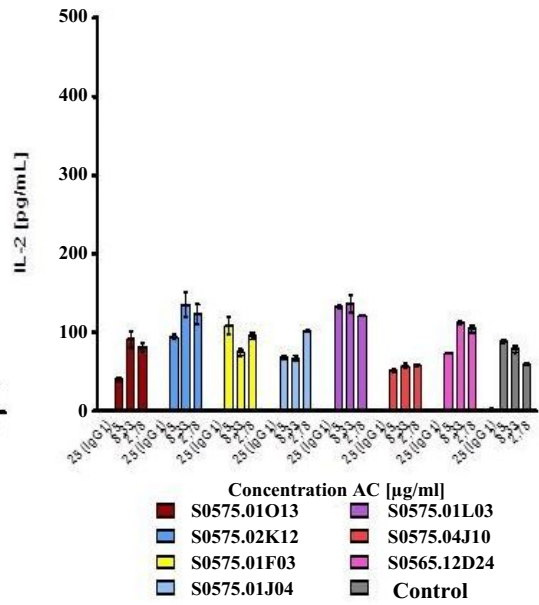
# Anticalins Activate T Cells By CD137 Cross Linking



### Donor A Capture



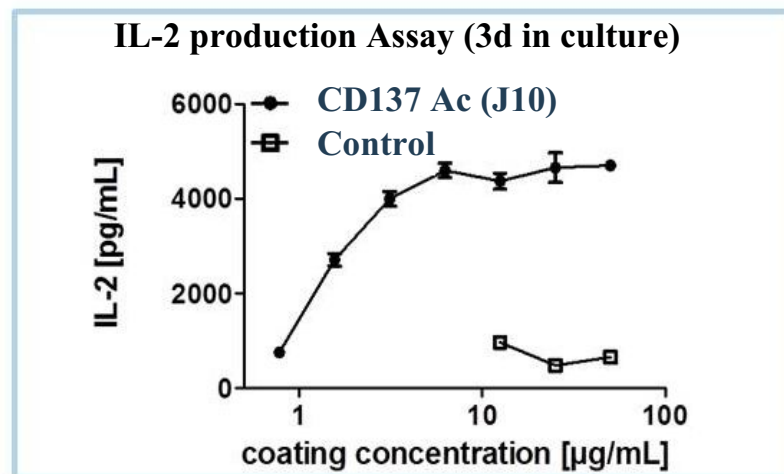
### Donor A Solution



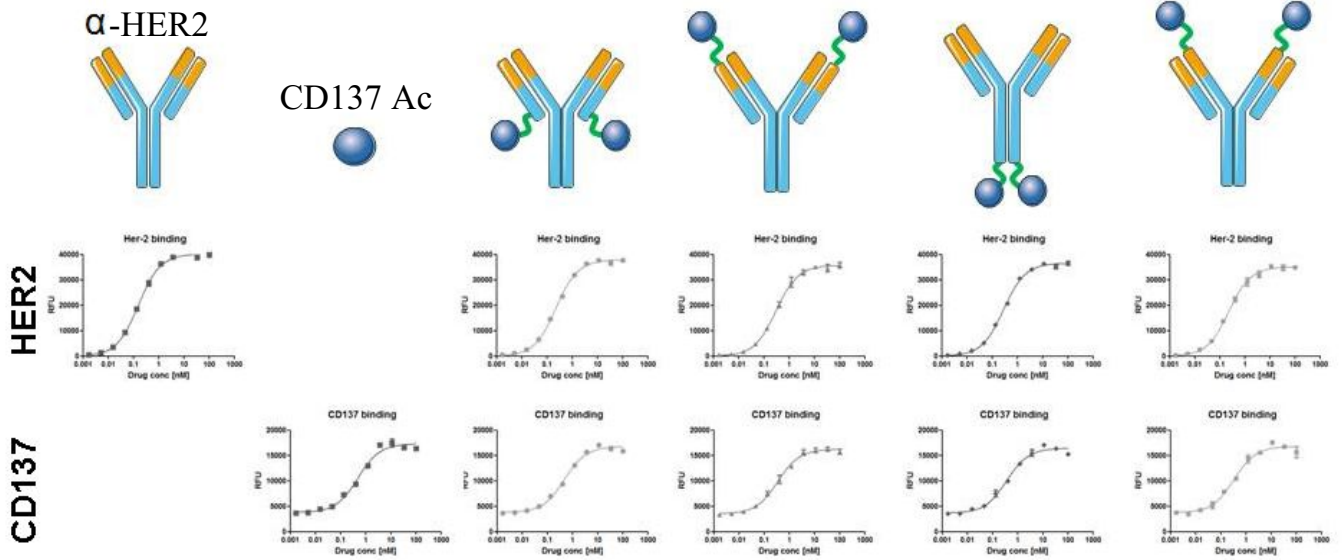
# CD137-Targeting Anticalin Has Demonstrated Agonistic Properties



- Lead CD137-engager Anticalin identified
  - Affinity:  $KD_{CD137} = 2nM$
  - “Non-competitive” CD137 engagement preserves ligand-binding capability to CD137L
  - Leads to T-cell activation in *ex vivo* human donor cell assay



# HER2-CD137 Bispecific Formats Retain Target Binding Capacity

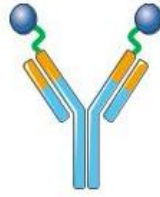
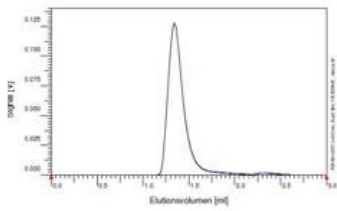


- Bispecific formats behave similarly to CD137 and HER2 building blocks
- Simultaneous target engagement confirmed for bispecific formats

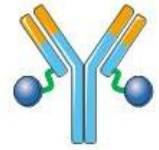
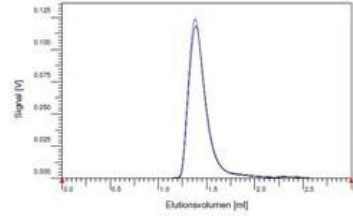
# HER2-CD137 Bispecific Formats Exhibit Good Biophysical Properties



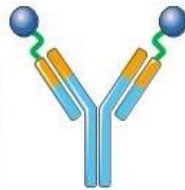
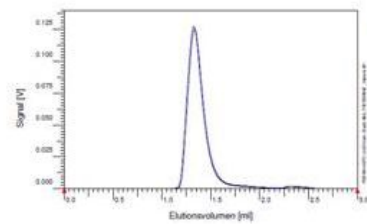
CD137-HER2-IgG4 (HC, N-term)



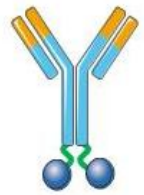
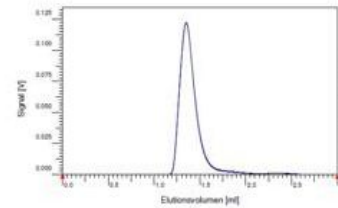
CD137-HER2-IgG4 (LC, C-term)



CD137-HER2-IgG4 (LC, N-term)



CD137-HER2-IgG4 (HC, C-term)



- Constructs stable after one week in PBS at 37°C - no change in SEC profile observed
- Stability in human plasma also confirmed using a dual binding ELISA

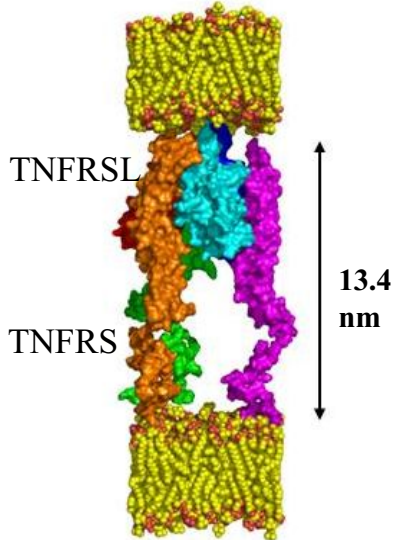


# Bispecific Geometry May Create Different Pharmacodynamic Effects

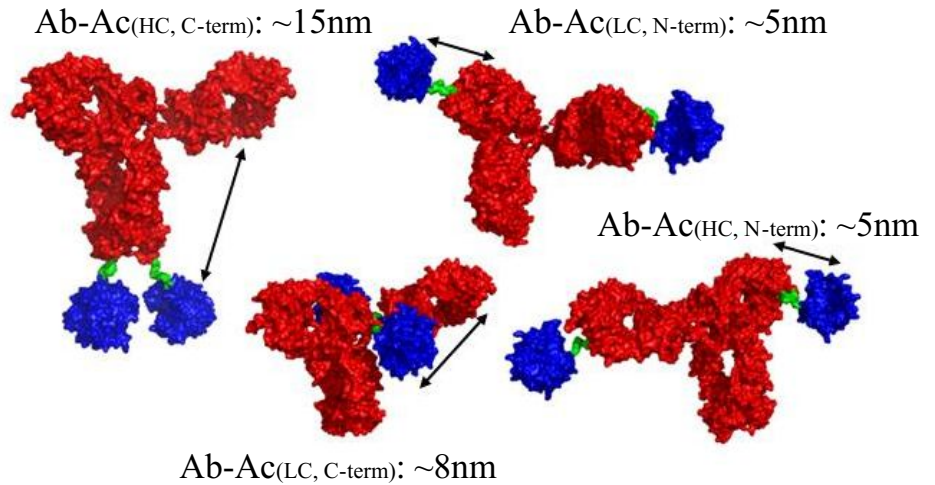


## e.g. TNFRS / TNFRSL

Minimum: 8nm  
Expected: 13.4nm  
Stretched: 34nm



## Pieris bispecific constructs result in different distances between target binding sites

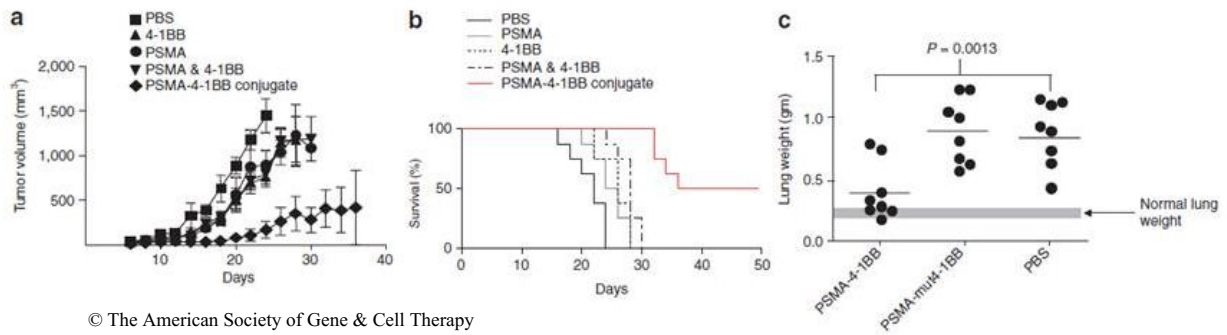


Several Bispecific Formats to Interrogate Optimal Target Synapse

# Preclinical Validation of Tumor-Localized Activation of CD137 (4-1BB)



## Tumor Targeted Costimulation With Bi-specific aptamers



© The American Society of Gene & Cell Therapy

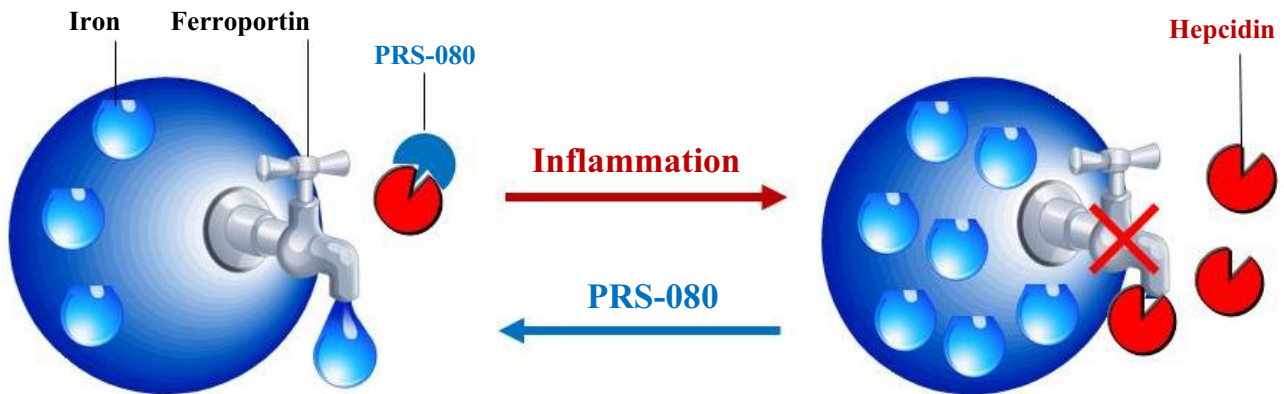
- Tumor-targeting CD137 bispecific aptamer leads to tumor growth inhibition and survival advantage *in vivo* compared to combination therapy
- Supports Pieris' bispecifics MoA
  - Tumor-specific clustering and activation of CD137 positive T cells

Pastor *et al*, Molecular Therapy: 2011, 10: 1878-1886



- Focusing on multispecifics to address non-responding patients and broaden therapeutic window compared to mAb approaches
  - Trafficking immunomodulation to tumor microenvironment
  - Varied geometry provides opportunity to test for optimal “synapse” between tumor cell and T cell
- Multispecifics can be mAb-Anticalin fusions (like PRS-343) or Anticalin-Anticalin fusions (undisclosed)
- Immunomodulatory engagers (like CD137) can be combined with several tumor-targeting moieties, in a hub-and-spoke fashion
- Prioritization of costimulatory targets (multiple targets beyond CD137 actively pursued with Anticalins), but multiple checkpoint inhibitors also being investigated
- Internal and external resources (e.g. Holbrook Kohrt, M.D., Ph.D.) to validate approach
- Objective of achieving drug candidate nomination by the end of 2015

## PRS-080: Intended to Reverse Hepcidin-Mediated Functional Iron Deficiency

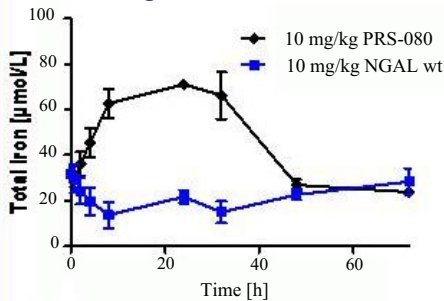


- PRS-080 designed to reverse hepcidin-mediated anemia by mobilizing iron trapped in the body's iron storage cells
- Addresses patients unresponsive to ESA and iron therapies
- PK profile of PRS-080 designed to match hepcidin biology

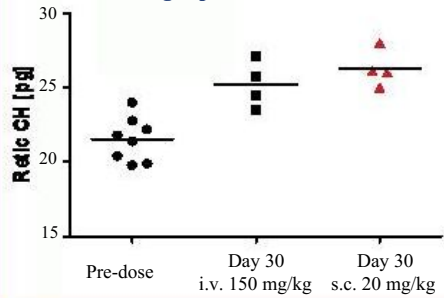
# PRS-080: Effective in vivo – Currently in Phase 1



Serum iron response in cyno following single i.v. administration



Elevation of reticulocyte Hg in cyno following repeated administration

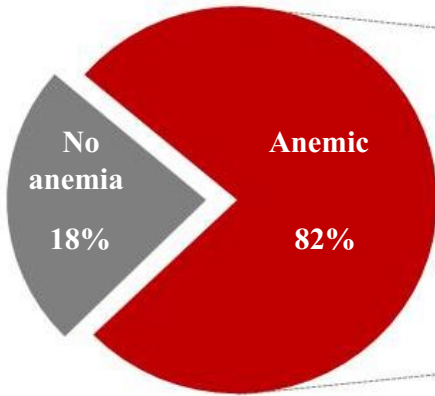


- ✓ **Demonstrated efficacy and safety in cynos**
  - Single-dose serum iron response
  - Increased reticulocyte hemoglobin after multiple doses
  - No adverse events in GLP tox
- ✓ **Funded through Ph I by ongoing € 6M EU grant**
- ✓ **First-in-man study initiated November 2014**
  - Single-dose escalation in HVs (n=48)
  - Endpoints:
    - Safety, MTD, PK, immunogenicity
    - Target engagement
    - PD effects: serum iron, ferritin, transferrin saturation, reticulocyte count, hemoglobin
  - Final cohort of subjects planned mid 2015
  - Reporting of results expected 2H 2015

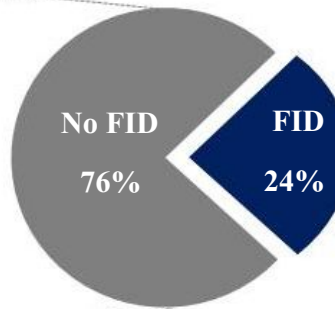
# PRS-080 in Chronic Kidney Disease Market Opportunity



**Hemodialysis Patients**  
(Total 1.9M Worldwide)



**Hemodialysis Patients with Anemia**  
(Total 1.6M Worldwide)



**Target Functional Iron-Deficient (FID) population:**

|      |         |
|------|---------|
| U.S. | 80,000  |
| EU   | 61,000  |
| JP   | 57,000  |
| ROW  | 186,000 |

**Estimated yearly treatment costs:**  
~ \$5,000 - \$10,000

**We believe treating FID anemic patients has large commercial potential**

Sources:  
USRDS 2014 Annual Data Report (2012 numbers): Atlas of Chronic Kidney Disease and End-Stage Renal Disease in the U.S  
ESRD Patients in 2011 – A Global Perspective, Fresenius Medical Care; Artisan Healthcare Consulting market research study



## Exclusivity

- Drug class protected through 2020s
- Controlled patent filings and prior art enable broad follow-on protection
- Unique IP for each program

## Freedom to Operate

- No third party IP identified to date for FTO on platform or therapeutic programs

| Program (Target) | CoM Patent Term |
|------------------|-----------------|
| cMet             | 2030            |
| Hepcidin         | 2031            |
| IL4Ra            | 2031            |
| 300 Series (IO)  | 2035+           |



- ✓ Human PoC achieved with Anticalin platform
  - Novel therapeutic proteins
  - Desirable drug-like properties
- ✓ Validation through strategic partnerships and collaborations
  - Sanofi, Daiichi Sankyo, Zydus, Stelis, Allergan
- ✓ Several differentiated proprietary and partnered drug candidates advancing towards or through clinical development
- ✓ Potential for rich news flow in 2015
  - Potential milestone payments; expected clinical data; seeking new partnerships
- ✓ Proven management team and highly regarded Board of Directors
- ✓ Unique approach to Immuno-oncology
- ✓ Solid Financial Position





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85354 Freising  
Germany*

*Tel.: +49 (0) 8161 1411 400  
Fax: +49 (0) 8161 1411 444*

*info@pieris.com  
www.pieris.com*