

PROSPECTUS

PIERIS PHARMACEUTICALS, INC.

15,250,634 Shares of Common Stock

This prospectus relates to the offering and resale by the selling stockholders identified herein of up to 15,250,634 shares of common stock, par value \$0.001 per share, of Pieris Pharmaceuticals, Inc. Of the shares being offered, 15,250,634 are presently issued and outstanding and 542,360 are issuable upon exercise of common stock purchase warrants. These shares include an aggregate of (i) 2,741,890 shares of common stock issued and sold to accredited investors in a private placement offering in a series of closings on December 17, 2014, December 18, 2014 and December 23, 2014, or the 2014 Private Placement, (ii) 11,966,384 shares of our common stock issued to former stockholders of Pieris Pharmaceuticals GmbH (formerly known as Pieris AG) in connection with the closing of a share exchange transaction on December 17, 2014, and (iii) 542,360 shares of common stock issuable upon exercise of common stock purchase warrants issued to Northland Securities, Inc. and Katalyst Securities, LLC, as co-exclusive placement agents, or the Placement Agents, and their designees in connection with the 2014 Private Placement. All shares of common stock issued in the 2014 Private Placement were sold at a purchase price of \$2.00 per share.

The selling stockholders may sell the shares of common stock on any national securities exchange or quotation service on which the securities may be listed or quoted at the time of sale, in the over-the-counter market, in one or more transactions otherwise than on these exchanges or systems, such as privately negotiated transactions, or using a combination of these methods, and at fixed prices, at prevailing market prices at the time of the sale, at varying prices determined at the time of sale, or at negotiated prices. See the disclosure under the heading "Plan of Distribution" elsewhere in this prospectus for more information about how the selling stockholders may sell or otherwise dispose of their shares of common stock hereunder.

The selling stockholders may sell any, all or none of the securities offered by this prospectus and we do not know when or in what amount the selling stockholders may sell their shares of common stock hereunder following the effective date of this registration statement.

We will not receive any proceeds from the sale of our common stock by the selling stockholders in the offering described in this prospectus.

Our common stock is listed on the NASDAQ Capital Market under the symbol "PIRS". On August 3, 2016, the last reported sale price for our common stock was \$1.73 per share.

Investing in our common stock involves a high degree of risk. Before making any investment in our common stock, you should read and carefully consider the risks described in this prospectus under "[Risk Factors](#)" beginning on page 5 of this prospectus.

You should rely only on the information contained in this prospectus or any prospectus supplement or amendment hereto. We have not authorized anyone to provide you with different information.

Neither the Securities and Exchange Commission nor any state securities commission has approved or disapproved of these securities or determined if this prospectus is truthful or complete. Any representation to the contrary is a criminal offense.

This prospectus is dated August 4, 2016

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About This Prospectus

You should rely only on the information that we have provided or incorporated by reference in this prospectus, any applicable prospectus supplement and any related free writing prospectus that we may authorize to be provided to you. We have not authorized anyone to provide you with different information. No dealer, salesperson or other person is authorized to give any information or to represent anything not contained in this prospectus, any applicable prospectus supplement or any related free writing prospectus that we may authorize to be provided to you. This prospectus is an offer to sell only the securities offered hereby, but only under circumstances and in jurisdictions where it is lawful to do so. You should assume that the information in this prospectus, any applicable prospectus supplement or any related free writing prospectus is accurate only as of the date on the front of the document and that any information we have incorporated by reference is accurate only as of the date of the document incorporated by reference, regardless of the time of delivery of this prospectus, any applicable prospectus supplement or any related free writing prospectus, or any sale of a security registered under the registration statement of which this prospectus is a part.

This prospectus does not contain all of the information included in the registration statement. For a more complete understanding of the offering of the capital stock, you should refer to the registration statement including the exhibits. This prospectus contains summaries of certain provisions contained in some of the documents described herein, but reference is made to the actual documents for complete information. All of the summaries are qualified in their entirety by the actual documents. Copies of some of the documents referred to herein have been filed, will be filed or will be incorporated by reference as exhibits to the registration statement of which this prospectus is a part, and you may obtain copies of those documents as described below under the heading “Where You Can Find Additional Information.” We further note that the representations, warranties and covenants made by us in any agreement that is filed as an exhibit to any document that is incorporated by reference in the accompanying prospectus were made solely for the benefit of the parties to such agreement, including in some cases, for the purpose of allocating risk among the parties to such agreements, and should not be deemed to be a representation, warranty or covenant to you. Moreover, such representations, warranties or covenants were accurate only as of the date when made. Accordingly, such representations, warranties and covenants should not be relied on as accurately representing the current state of our affairs.

As used in this prospectus, unless the context indicates or otherwise requires, “our Company”, “the Company”, “Pieris”, “we”, “us”, and “our” refer to Pieris Pharmaceuticals, Inc., a Nevada corporation, and its consolidated subsidiary, and the term “Pieris GmbH” refers to Pieris Pharmaceuticals GmbH, a company organized under the laws of Germany that, through a share exchange transaction completed on December 17, 2014, has become our wholly owned subsidiary.

We have registered trademarks for Pieris[®], Anticalin[®] and Pocket Binding[®]. All other trademarks, trade names and service marks included in this prospectus are the property of their respective owners. Use or display by us of other parties’ trademarks, trade dress or products is not intended to and does not imply a relationship with, or endorsements or sponsorship of, us by the trademark or trade dress owner.

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PROSPECTUS SUMMARY

The following is a summary of what we believe to be the most important aspects of our business and the offering of our common stock under this prospectus. This summary does not contain all of the information that should be considered before investing in our common stock. Investors should read the entire prospectus carefully, including the risks related to our business and purchasing our common stock discussed under “Risk Factors” beginning on page 5 of this prospectus, “Special Notes Regarding Forward Looking Statements” and our financial statements and the notes to those financial statements incorporated by reference in this prospectus.

Overview

We are a clinical stage biotechnology company that discovers and develops Anticalin-based drugs to target validated disease pathways in a unique and transformative way. Our pipeline includes immuno-oncology multi-specifics tailored for the tumor micro-environment, an inhaled Anticalin to treat uncontrolled asthma and a half-life-optimized Anticalin to treat anemia. Our proprietary Anticalins are a novel class of protein therapeutics validated in the clinic and by partnerships with leading pharmaceutical companies.

Anticalin[®] proteins are a class of low molecular-weight therapeutic proteins derived from lipocalins, which are naturally occurring low-molecular weight human proteins typically found in blood plasma and other bodily fluids. Anticalin[®]-branded proteins function similarly to monoclonal antibodies, or mAbs, by binding tightly and specifically to a diverse range of targets.

Our core Anticalin[®] technology and platform were developed in Germany, and we have collaboration arrangements with major multi-national pharmaceutical companies headquartered in the U.S., Europe and Japan and with regional pharmaceutical companies headquartered in India. These include existing agreements with Daiichi Sankyo Company Limited, or Daiichi Sankyo, and Sanofi Group, or Sanofi, pursuant to which our Anticalin platform has consistently achieved its development milestones. Furthermore, we established a collaboration with F.Hoffmann—La Roche Ltd. and Hoffmann—La Roche Inc., or Roche in December 2015. We have discovery and preclinical collaboration and service agreements with both academic institutions and private firms in Australia, which increasingly are being handled through Pieris Australia Pty Ltd., a wholly owned subsidiary of Pieris.

Additional Information

For more information regarding our business, see the disclosure under the headings “Management’s Discussion and Analysis of Financial Condition and Results of Operations” and “Business” included in our Annual Report on Form 10-K for the year ended December 31, 2015. For a description of certain risks related to our business, see the disclosure under the heading “Risk Factors” beginning on page 5 of this prospectus.

Implications of Being an Emerging Growth Company

As a company with less than \$1.0 billion in revenue during our last fiscal year, we qualify as an “emerging growth company” as defined in the Jumpstart Our Business Startups Act, or JOBS Act, enacted in April 2012. An emerging growth company may take advantage of reduced reporting requirements that are otherwise applicable to public companies. These provisions include, but are not limited to:

- being required to provide only two years of audited financial statements in addition to any required unaudited interim financial statements, with correspondingly reduced disclosure in the “Management’s Discussion and Analysis of Financial Condition and Results of Operations” section of our periodic reports and registration statements;
- not being required to comply with the auditor attestation requirements of Section 404 of the Sarbanes-Oxley Act of 2002, or Sarbanes-Oxley Act;
- reduced disclosure obligations regarding executive compensation in our periodic reports, proxy statements and registration statements; and
- exemptions from the requirements of holding a nonbinding advisory vote on executive compensation and stockholder approval of any golden parachute payments not previously approved.

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We will remain an emerging growth company until the earliest of (i) the end of the fiscal year in which the market value of our common stock that is held by non-affiliates exceeds \$700 million as of the end of the second fiscal quarter, (ii) the end of the fiscal year in which we have total annual gross revenues of \$1 billion or more during such fiscal year, (iii) the date on which we issue more than \$1 billion in non-convertible debt in a three-year period or (iv) December 31, 2019, the end of the fiscal year following the fifth anniversary of the date of the first sale of our common stock pursuant to an effective registration statement filed under the Securities Act of 1933, as amended, or the Securities Act.

We may choose to take advantage of some but not all of these reduced burdens. We have taken advantage of certain of the reduced disclosure obligations, which include providing only two years of audited financial statements and correspondingly reduced financial disclosures and reduced executive compensation disclosure in our periodic reports, proxy statements and registration statements, and may elect to take advantage of other reduced burdens in future filings. As a result, the information that we provide to our stockholders may be different than you might receive from other public reporting companies in which you hold equity interests.

Under the JOBS Act, emerging growth companies can delay adopting new or revised accounting standards until such time as those standards apply to private companies. However, we have irrevocably elected not to avail ourselves of this extended transition period for complying with new or revised accounting standards and, therefore, we will be subject to the same new or revised accounting standards as other public companies that are not emerging growth companies.

Risks Associated with Our Business

Our business and ability to execute our business strategy are subject to a number of risks of which you should be aware before you decide to buy our common stock. In particular, you should consider the following risks, which are discussed more fully in the section entitled “Risk Factors” in this prospectus, as well as the other risks described in “Risk Factors.”

- We have incurred significant losses since our inception and anticipate that we will continue to incur losses for the foreseeable future. We currently have no product revenues and no approved products, and will need to raise additional capital to operate our business.
- We will need substantial additional funding to continue our operations, which could result in significant dilution or restrictions on our business activities. We may not be able to raise capital when needed, if at all, which would force us to delay, reduce or eliminate our product development programs or commercialization efforts and could cause our business to fail.
- We are heavily dependent on the successful development of our drug candidates and programs and we cannot be certain that we will receive regulatory approvals or be able to successfully commercialize our products even if we receive regulatory approvals.
- Preclinical and clinical testing of our drug candidates that have been conducted to date or will be conducted in future may not have been or may not be performed in compliance with applicable regulatory requirements, which could lead to increased costs or material delays for their further development.
- We may not be successful in our efforts to build a pipeline of drug candidates.
- Our research and development is based on a rapidly evolving area of science, and our approach to drug discovery and development is novel and may never lead to marketable products.
- Clinical drug development involves a lengthy and expensive process with uncertain outcomes; it is very difficult to design and implement; and any of our clinical trials or studies could produce unsuccessful results or fail at any stage in the testing process.
- If we experience delays or difficulties in the enrollment of research subjects in clinical trials, those clinical trials could take longer than expected to complete and our receipt of necessary regulatory approvals could be delayed or prevented.

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- The review processes of regulatory authorities are lengthy, time consuming, expensive and inherently unpredictable. If we are unable to obtain approval for our product candidates from applicable regulatory authorities, we will not be able to market and sell those drug candidates in those countries or regions and our business will be substantially harmed.
- We may expend our limited resources to pursue a particular drug candidate or indication that does not produce any commercially viable products and may fail to capitalize on drug candidates or indications that may be more profitable or for which there is a greater likelihood of success.
- We rely on third parties to conduct preclinical studies and clinical trials. If these third parties do not successfully carry out their contractual duties or meet expected deadlines, we may not be able to obtain regulatory approval for our drug candidates and our business could be substantially harmed.
- We will need to grow the size of our organization, and we may experience difficulties in managing any growth we may achieve.
- If our efforts to protect the proprietary nature of the intellectual property related to our technologies are not adequate, we may not be able to compete effectively in our market and our business would be harmed.
- The patent protection covering some of our product candidates may be dependent on third parties, who may not effectively maintain that protection.
- If we are not able to attract and retain highly qualified personnel, we may not be able to successfully implement our business strategy.
- Our share price is expected to be volatile and may be influenced by numerous factors, some of which are beyond our control.

Corporate History

Pieris Pharmaceuticals, Inc. was incorporated under the laws of the State of Nevada on May 24, 2013 with the name “Marika Inc.” We changed our name to “Pieris Pharmaceuticals, Inc.” on December 16, 2014. On December 17, 2014, we closed a share exchange transaction in which the stockholders of Pieris GmbH contributed all of their equity interests in Pieris GmbH to Pieris in exchange for shares of our common stock, which resulted in Pieris GmbH becoming our wholly owned subsidiary. We refer to this transaction as the Acquisition. Immediately following the closing of the Acquisition, the business of Pieris GmbH became our sole focus.

On December 17, 2014, we entered into a private placement transaction, or the 2014 Private Placement, with certain accredited investors, providing for the issuance and sale to such investors of an aggregate of 6,779,510 shares of our common stock in a private placement offering conducted through a series of closings occurring on December 17, 18 and 23, 2014. At the closings of the 2014 Private Placement we issued to the placement agents and their designees, warrants, or the Placement Warrants, to acquire up to 542,360 shares of our common stock at an exercise price of \$2.00 per share. Each of the Placement Warrants is exercisable at any time at the option of the holder until the five-year anniversary of its date of issuance.

Corporate Information

Our corporate headquarters are located at 255 State Street, 9th Floor, Massachusetts 02109 and our telephone number is (857) 246-8998. We maintain a website at www.pieris.com, to which we regularly post copies of our press releases as well as additional information about us. The information contained on, or that can be accessed through, our website is not a part of this prospectus. We have included our website address in this prospectus solely as an inactive textual reference.

Our Annual Reports on Form 10-K, Quarterly Reports on Form 10-Q, Current Reports on Form 8-K and all amendments to those reports filed or furnished pursuant to Section 13(a) or 15(d) of the Securities Exchange Act of 1934, as amended, or the Exchange Act, are available free of charge through the investor relations page of our internet website as soon as reasonably practicable after we electronically file such material with, or furnish it to, the SEC.

All brand names or trademarks appearing in this prospectus as the property of their respective holders. Use or display by us of other parties' trademarks, trade dress, or products in this prospectus is not intended to, and does not, imply a relationship with, or endorsement or sponsorship of, us by the trademark or trade dress owners.

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THE OFFERING

This prospectus relates to the resale from time to time by the selling stockholders identified herein of up to 15,250,634 shares of our common stock. We are not offering any shares for sale under the registration statement of which this prospectus is a part.

Common stock outstanding prior to this offering: 43,058,827(1)

Common stock offered by the selling stockholders hereunder: 15,250,634(2)

Common stock to be outstanding after this offering: 43,058,827(1)

Use of Proceeds: We will not receive any proceeds from the sale of our common stock offered by the selling stockholders under this prospectus.

Offering Price: The selling stockholders may sell all or a portion of their shares through public or private transactions at prevailing market prices or at privately negotiated prices.

Risk Factors: Investing in our securities involves a high degree of risk and purchasers may lose their entire investment. See the disclosure under the heading "Risk Factors" beginning on page 5 of this prospectus.

NASDAQ Trading Symbol: PIRS

- (1) Excludes, as of August 3, 2016, (a) 3,750,000 shares of common stock reserved for future issuance under the Pieris Pharmaceuticals, Inc. 2016 Employee, Director and Consultant Equity Incentive Plan, or the 2016 Pieris Plan, (b) 3,820,063 shares of common stock reserved for future issuance in connection with options to purchase shares of common stock that have been issued to our executive officers, directors, employees and consultants issued under the Pieris Pharmaceuticals, Inc. 2014 Employee, Director and Consultant Equity Incentive Plan, or the 2014 Plan, (c) an option to purchase 500,000 shares of common stock issued outside of the 2014 Pieris Plan to a newly-hired executive officer that was an inducement option, material to the executive officer entering into employment with the Company in 2015, (d) warrants to purchase up to 4,913,279 shares of our common stock issued in connection with a private placement of our securities on June 8, 2016, or the 2016 PIPE and (f) 4,963,000 shares of our common stock issuable upon the conversion of 4,963 shares of our Series A Convertible Preferred Stock, or Series A Preferred Shares.
- (2) Includes (a) 2,741,890 shares of common stock issued and sold to certain selling stockholders in the 2014 Private Placement, (b) 11,966,384 shares of our common stock issued to certain selling stockholders in connection with the Acquisition and (c) 542,360 shares of common stock issuable upon exercise of the Placement Warrants.

RISK FACTORS

Investing in our common stock involves a high degree of risk. You should carefully consider the risks and uncertainties and all other information, documents or reports included or incorporated by reference in this prospectus and, if applicable, any prospectus supplement or other offering materials, including the risks and uncertainties discussed under “Risk Factors” in our most recent Annual Report on Form 10-K, as amended, filed with the SEC, which are incorporated by reference, in this prospectus, and any updates to those risk factors included from time to time in our periodic and current reports filed with the SEC and incorporated by reference in this prospectus, before making any decision to invest in shares of our common stock. If any of the events discussed in these risk factors occurs, our business, prospects, results of operations, financial condition and cash flows could be materially harmed. If that were to happen, the trading price of our common stock could decline, and you could lose all or part of your investment. Additional risks not currently known to us or other factors not perceived by us to present significant risks to our business at this time also may impair our business operations.

SPECIAL NOTE REGARDING FORWARD-LOOKING STATEMENTS

This prospectus and the documents incorporated by reference in this prospectus include forward-looking statements within the meaning of Section 27A of the Securities Act and Section 21E of the Securities Exchange Act of 1934, as amended, including statements regarding:

- the results of our research and development activities, including uncertainties relating to the discovery of potential drug candidates and the preclinical and ongoing or planned 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;
- competition in our industry; and
- regulatory developments in the U.S. and foreign countries.

Such statements in connection with any discussion of future operations or financial performance are identified by the use of words such as “anticipate,” “believe,” “estimate,” “expect,” “intend,” “may,” “plan,” “project,” “target,” “potential,” “shall,” “will,” “would,” “could,” “should,” “continue,” and similar expressions. You also can identify them by the fact that they do not relate strictly to historical or current facts. There are a number of important risks and uncertainties that could cause our actual results to differ materially from the results discussed in the forward-looking statements.

We may not actually achieve the plans, intentions or expectations disclosed in our forward-looking statements, and you should not place undue reliance on our forward-looking statements. Actual results or events could differ materially from the plans, intentions and expectations disclosed in the forward-looking statements we make. We have included important cautionary statements in this prospectus or in the documents incorporated by reference in this prospectus, particularly in the “Risk Factors” section, that we believe could cause actual results or events to differ materially from the forward-looking statements that we make. For a summary of such factors, please refer to the section entitled “Risk Factors” in this prospectus, as updated and supplemented by the discussion of risks and uncertainties under “Risk Factors” contained in our most recent annual report on Form 10-K, as revised or supplemented by our subsequent quarterly reports on Form 10-Q or our current reports on Form 8-K, as well as any amendments thereto, as filed with the SEC and which are incorporated herein by reference. The information contained in this document is believed to be current as of the date of this document. We do not undertake any obligation or intend to update any of the forward-looking statements after the date of this document to conform these statements to actual results or to changes in our expectations, except as required by law.

SELLING STOCKHOLDERS

This prospectus covers the resale from time to time by the selling stockholders identified in the table below of up to an aggregate of 14,708,274 shares of our common stock, which includes (i) 2,741,890 issued and outstanding shares of our common stock issued and sold to investors in the 2014 Private Placement, (ii) 11,966,384 shares of our common stock, issued to former stockholders of Pieris GmbH in connection with the closing of the Acquisition, and (iii) 542,360 shares of our common stock issuable to holders of the Placement Warrants issued in connection with the 2014 Private Placement.

Pursuant to the registration rights agreement we entered into with the selling stockholders in connection with the 2014 Private Placement, or the 2014 Private Placement Registration Rights Agreement, we have filed with the SEC the registration statement of which this prospectus forms a part in order to register such resales of our common stock under the Securities Act. We have also agreed to cause this registration statement to become effective and to keep such registration statement effective within and for the time periods set forth in the 2014 Private Placement Registration Rights Agreement. Our failure to satisfy the filing or effectiveness deadlines set forth in the 2014 Private Placement Registration Rights Agreement may subject us to payment of certain monetary penalties pursuant to the terms of the 2014 Private Placement Registration Rights Agreement.

The selling stockholders identified in the table below may from time to time offer and sell under this prospectus any or all of the shares of common stock described under the column “Shares of Common Stock Being Offered in this Offering” in the table below. The table below has been prepared based upon information furnished to us by the selling stockholders as of the dates represented in the footnotes accompanying the table. The selling stockholders identified below may have sold, transferred or otherwise disposed of some or all of their shares since the date on which the information in the following table is presented in transactions exempt from or not subject to the registration requirements of the Securities Act. Information concerning the selling stockholders may change from time to time and, if necessary, we will amend or supplement this prospectus accordingly and as required.

We have been advised, as noted in the footnotes in the table below, that certain of the selling stockholders are broker-dealers, affiliates of a broker-dealer and/or underwriter. Those selling stockholders have informed us that they bought our securities in the ordinary course of business, and that none of these selling stockholders had, at the time of their purchase of our securities, any agreements or understandings, directly or indirectly, with any person to distribute such securities.

The following table and footnote disclosure following the table sets forth the name of each selling stockholder, the nature of any position, office or other material relationship, if any, that the selling stockholder has had within the past three years with us or with any of our predecessors or affiliates, and the number of shares of our common stock beneficially owned by the selling stockholder before this offering. The number of shares reflected are those beneficially owned, as determined under applicable rules of the SEC, and the information is not necessarily indicative of beneficial ownership for any other purpose. Under applicable SEC rules, beneficial ownership includes any shares of common stock as to which a person has sole or shared voting power or investment power and any shares of common stock which the person has the right to acquire within 60 days after August 3, 2016 through the exercise of any option, warrant or right or through the conversion of any convertible security. Unless otherwise indicated in the footnotes to the table below and subject to community property laws where applicable, we believe, based on information furnished to us, that each of the selling stockholders named in this table has sole voting and investment power with respect to the shares indicated as beneficially owned.

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We have assumed that all shares of common stock reflected in the table as being offered in the offering covered by this prospectus will be sold from time to time in this offering. We cannot provide an estimate as to the number of shares of common stock that will be held by the selling stockholders upon termination of the offering covered by this prospectus because the selling stockholders may offer some, all or none of their shares of common stock being offered in the offering.

Selling Stockholder (1)	Broker-Dealer or Broker-Dealer Affiliate	Footnote, if any	Shares of Common Stock Beneficially Owned Before this Offering	Percentage of Common Stock Beneficially Owned Before this Offering (2)	Shares of Common Stock Being Offered in this Offering	Shares of Common Stock Beneficially Owned Upon Completion of this Offering (3)	Percentage of Outstanding Common Stock Beneficially Owned Upon Completion of this Offering (2)(3)
1798 Fundamental Strategies Master Fund Ltd		(4)	1,500,000	3.48%	1,500,000	—	*
Aaron Segal	§	(5)	40,506	*	17,006	23,500	*
Adolfo and Donna Carmona, JTWROS			50,000	*	50,000	—	*
Alice M. and Randall A. Sebring, JTWROS			30,000	*	30,000	—	*
Allan Lipkowitz Revocable Living Trust 8/26/2005		(6)	12,500	*	12,500	—	*
Allen Chase Foundation DBA Eaglebrook School		(7)	15,000	*	15,000	—	*
American Portfolios Financial Services, Inc.	§	(8)	9,068	*	9,068	—	*
Andre Iseli*			25,000	*	25,000	—	*
Andrew Brenner			20,000	*	20,000	—	*
Anthony Naer			2,000	*	2,000	—	*
Anton and Barbara Bogner, JTWROS			80,000	*	80,000	—	*
Arielle Crothers			5,000	*	5,000	—	*
Barry Cohn	§	(9)	4,534	*	4,534	—	*
Barry Shemaria			6,000	*	6,000	—	*
Benjamin R. Bowen	§	(10)	35,000	*	35,000	—	*
Benjamin Schulman			12,500	*	12,500	—	*
BioM AG Munich Biotech Development		(11)	369,540	*	369,540	—	*
BioM Venture Capital GmbH & Co. KG		(12)	281,244	*	281,244	—	*
Boris Shames			4,000	*	4,000	—	*
Brio Capital Master Fund Ltd.		(13)	32,870	*	32,870	—	*
Bruce Rosen			1,800	*	1,800	—	*
Byron C. Hughey			7,500	*	7,500	—	*
Cadila Healthcare Limited		(14)	1,415,539	3.29%	1,415,539	—	*
Carl J. Domino			50,000	*	50,000	—	*
Charles and Beverly Freeland, JTWROS			10,000	*	10,000	—	*
Charles and Diane Medici, JTWROS			12,500	*	12,500	—	*
Choi Family Trust Dated March 15, 2001		(15)	50,000	*	50,000	—	*
Christopher Figoni			12,500	*	12,500	—	*
Christopher James Cozzolino	§	(16)	2,840	*	2,840	—	*
Christopher Washburn			12,500	*	12,500	—	*

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Selling Stockholder (1)	Broker-Dealer or Broker-Dealer Affiliate	Footnote, if any	Shares of Common Stock Beneficially Owned Before this Offering	Percentage of Common Stock Beneficially Owned Before this Offering (2)	Shares of Common Stock Being Offered in this Offering	Shares of Common Stock Beneficially Owned Upon Completion of this Offering (3)	Percentage of Outstanding Common Stock Beneficially Owned Upon Completion of this Offering (2)(3)
Claus Schalper		(17)	216,559	*	1,970	216,559	*
Clay Godfrey Lebhar			12,500	*	12,500	—	*
Clayton A. Struve	§	(18)	50,000	*	50,000	—	*
Craig Whited			50,000	*	50,000	—	*
Crossroads Limited Partnership		(19)	50,000	*	50,000	—	*
Currie Family Trust		(20)	20,000	*	20,000	—	*
Daniel Brian Salvas			12,500	*	12,500	—	*
Daryl Squicciarini			25,000	*	25,000	—	*
Dave Rickey & Daughter's Foundation Charitable Trust		(21)	2,000	*	2,000	—	*
David and Susan Stollwerk, JTWROS			12,500	*	12,500	—	*
David Blau			50,000	*	50,000	—	*
David Landskowsky	§	(22)	80,281	*	21,319	58,962	*
Delux Investment Group LLC		(23)	5,000	*	5,000	—	*
Dennis R. DeLoach, Jr.			12,500	*	12,500	—	*
Dennis Reilly			10,500	*	10,500	—	*
Double Add Investments I LLC		(24)	7,500	*	7,500	—	*
Douglas Kohrs			75,000	*	75,000	—	*
Douglas Krasnoff			2,500	*	2,500	—	*
Dr. Karsten Schürle			1,323	*	1,323	—	*
Dr. Steffen Schlehuber			2,632	*	2,632	—	*
Due Mondt Investments, Ltd.		(25)	10,000	*	10,000	—	*
Edward King			36,600	*	36,600	—	*
EFD Capital Inc.		(26)	21,078	*	16,078	5,000	*
Elena Laguta			5,000	*	5,000	—	*
Eliezer Lubitch			8,525	*	8,525	—	*
Eric Rubenstein	§	(27)	87,558	*	24,382	63,176	*
Ethel and Richard Krasnoff, JTWROS			2,500	*	2,500	—	*
Gibralt Capital Corporation		(28)	64,038	*	64,038	—	*
Giles Sandvik Giles and Jeanne Sandvik, JTWROS			10,000	*	10,000	—	*
Glen Ackermann			2,500	*	2,500	—	*
Gubbay Investments LLC		(29)	17,500	*	17,500	—	*
H Investment Company, LLC		(30)	50,000	*	50,000	—	*
HFR HE Sphera Global Healthcare Master Trust		(31)	23,550	*	23,550	—	*
Howard and Susan Kalka, JTWROS			25,000	*	25,000	—	*
Howard Stringer		(32)	25,000	*	25,000	—	*
Irwin Gruverman			12,500	*	12,500	—	*
Jacqueline Cozzolino			7,500	*	7,500	—	*

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<u>Selling Stockholder (1)</u>	<u>Broker-Dealer or Broker-Dealer Affiliate</u>	<u>Footnote, if any</u>	<u>Shares of Common Stock Beneficially Owned Before this Offering</u>	<u>Percentage of Common Stock Beneficially Owned Before this Offering (2)</u>	<u>Shares of Common Stock Being Offered in this Offering</u>	<u>Shares of Common Stock Beneficially Owned Upon Completion of this Offering (3)</u>	<u>Percentage of Outstanding Common Stock Beneficially Owned Upon Completion of this Offering (2)(3)</u>
James and Dorothy Saylor, JTWROS			5,000	*	5,000	—	*
Jay E. Bradbury			12,500	*	12,500	—	*
Jeffrey Paul Peterson	§	(33)	15,000	*	15,000	—	*
Jeffrey Scott and Christine Kellye Rennell, JTWROS			100,000	*	100,000	—	*
Joel L. Hochman Revocable Trust UAD 12/8/1994		(34)	25,000	*	25,000	—	*
John C. Blazier and Fleur A. Christensen, JTWROS			12,500	*	12,500	—	*
John O. Gallant			12,500	*	12,500	—	*
John V. Wagner Jr.			25,000	*	25,000	—	*
Jonathan and Gina Blatt, JTWROS			25,000	*	25,000	—	*
Joseph Codi			12,500	*	12,500	—	*
Joseph O. Manzi			25,000	*	25,000	—	*
Joseph Rubino			12,500	*	12,500	—	*
Kaushal Pandya			5,010	*	5,010	—	*
Kevin and Susan Koch, JTWROS			12,500	*	12,500	—	*
Kevin M. Filosa	§	(35)	4,216	*	4,216	—	*
KfW—Kreditanstalt für Wiederaufbau		(36)	299,549	*	299,549	—	*
Kimberly Hanley	§	(37)	629	*	629	—	*
Laurel Walrath			5,000	*	5,000	—	*
Lee Harrison Corbin			50,000	*	50,000	—	*
Lee J. Seidler Revocable Trust Dated April 12, 1990		(38)	25,000	*	25,000	—	*
Linda DelPonte			25,000	*	25,000	—	*
Lindsey S. McGrandy	§	(39)	464	*	464	—	*
Lisa Ann Torsiello			75,000	*	75,000	—	*
The Bell Family Trust Dated 2/2/95 As Amended		(40)	100,000	*	100,000	—	*
Lynn Zheng			50,000	*	50,000	—	*
Mackie Klingbeil			25,000	*	25,000	—	*
Mahesh N. Ganmukhi			100,000	*	100,000	—	*
Mahipal Ravipati			5,000	*	5,000	—	*
MAPO Beteiligungsgesellschaft mbH		(41)	24,233	*	24,233	—	*
Martillo Finance Limited		(42)	56,000	*	56,000	—	*
Martin J. Junge			12,500	*	12,500	—	*
Matthew Longo			37,000	*	37,000	—	*
Melissa and Andrew Fisher, JTWROS			15,000	*	15,000	—	*
Meryle Evans Family Trust		(43)	15,000	*	15,000	—	*
Michael Crawford			50,000	*	50,000	—	*

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Selling Stockholder (1)	Broker-Dealer or Broker-Dealer Affiliate	Footnote, if any	Shares of Common Stock Beneficially Owned Before this Offering	Percentage of Common Stock Beneficially Owned Before this Offering (2)	Shares of Common Stock Being Offered in this Offering	Shares of Common Stock Beneficially Owned Upon Completion of this Offering (3)	Percentage of Outstanding Common Stock Beneficially Owned Upon Completion of this Offering (2)(3)
Michael J. Pierce			100,000	*	100,000	—	*
Michael Silverman	§	(44)	206,293	*	61,064	145,229	*
Mildred LaMarca			1,000	*	1,000	—	*
Noel McGee			5,000	*	5,000	—	*
Northland Securities, Inc.	§	(45)	50,000	*	50,000	—	*
Northlea Partners LLLP		(46)	25,000	*	25,000	—	*
Novo Nordisk A/S		(47)	1,545,643	3.59%	1,545,643	—	*
O. Stuart Chase			10,000	*	10,000	—	*
OrbiMed Private Investments III, LP		(48)	6,698,939	15.70%	6,698,939	—	*
OrbiMed Associates III, LP		(48)	60,681	*	60,681	—	*
Paul Ehrenstein	§	(49)	8,039	*	8,039	—	*
Paul Tompkins			4,500	*	4,500	—	*
Peter C. Gould			12,500	*	12,500	—	*
Peter Figoni			5,000	*	5,000	—	*
Philip C. Kempisty	§	(50)	8,039	*	8,039	—	*
Philip W. Faucette II			12,500	*	12,500	—	*
Prof. Skerra Beteiligungsgesellschaft mbH		(51)	98,891	*	98,891	—	*
Ravi Gutta			40,000	*	40,000	—	*
Richard D. Cohen			25,000	*	25,000	—	*
Richard Pisacano		(52)	5,000	*	5,000	—	*
RMR Wealth Management, LLC	§	(53)	9,400	*	9,400	—	*
Robert B. Prag			25,000	*	25,000	—	*
Robert Crothers	§	(54)	57,862	*	57,862	—	*
Robert David Frankel			12,500	*	12,500	—	*
Robert G. Curtin			7,500	*	12,500	—	*
Robert McGrath			6,000	*	6,000	—	*
Robison Crothers		(55)	10,000	*	10,000	—	*
Roger D. Bozarth			12,500	*	12,500	—	*
Roman Livson	§	(56)	6,496	*	6,496	—	*
Scott Cardone	§	(57)	23,990	*	10,098	13,892	*
Scott Rapfogel			12,500	*	12,500	—	*
Steven and Seena Bernhard, JTWROS							
Steven Bernhard			10,000	*	10,000	—	*
Sphera Global Healthcare Master Fund		(58)	476,450	1.11%	476,450	—	*
Stanley Rabinovich			50,000	*	50,000	—	*
Stanton J. Rowe			67,500	*	67,500	—	*
Stephen A. DiChiara			12,500	*	12,500	—	*
Stephen Renaud	§	(59)	221,067	*	73,564	147,503	*
Technologie Beteiligungsfonds Bayern II GmbH & Co. KG		(60)	176,166	*	176,166	—	*
The Del Mar Consulting Group, Inc. Retirement Plan Trust		(61)	8,000	*	8,000	—	*

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Selling Stockholder (1)	Broker-Dealer or Broker-Dealer Affiliate	Footnote, if any	Shares of Common Stock Beneficially Owned Before this Offering	Percentage of Common Stock Beneficially Owned Before this Offering (2)	Shares of Common Stock Being Offered in this Offering	Shares of Common Stock Beneficially Owned Upon Completion of this Offering (3)	Percentage of Outstanding Common Stock Beneficially Owned Upon Completion of this Offering (2)(3)
Thomas LaMarca			3,000	*	3,000	—	*
Thomas Norgiel			25,000	*	25,000	—	*
Thomas Zahavi			25,000	*	25,000	—	*
Timothy Hermann	§	(62)	27,689	*	10,603	17,086	*
Todd Harrigan	§	(63)	37,543	*	14,159	23,384	*
TransConnect Unternehmensberatungs-und Beteiligungs AG		(64)	443,491	1.03%	443,491	—	*
Trout Capital, LLC	§	(65)	80,000	*	80,000	—	*
Walter G. Gans			12,500	*	12,500	—	*
William C. Sykes			25,000	*	25,000	—	*
William Crothers			9,000	*	9,000	—	*
William Jeffrey Kadi			75,000	*	75,000	—	*
William Norman Strawbridge			20,000	*	20,000	—	*
Valerie and Leland Zurich, JTWROS			50,000	*	50,000	—	*

* Less than 1%.

§ The selling stockholder is a broker-dealer or an affiliate of a broker-dealer.

(1) All information regarding investors in the 2014 Private Placement is provided as of August 3, 2016.

(2) Percentage ownership is based on a denominator equal to the sum of (i) 43,058,827 shares of our common stock outstanding as of August 3, 2016, and (ii) the number of shares of common stock issuable upon exercise or conversion of convertible securities beneficially owned by the applicable selling stockholder.

(3) Assumes that all shares of common stock being registered under the registration statement of which this prospectus forms a part are sold in this offering, and that none of the selling stockholders acquire additional shares of our common stock after the date of this prospectus and prior to completion of this offering.

(4) Lombard Odier Asset Management (USA) Corp. is the investment advisor to the selling stockholder and as such has the power to vote or dispose of the securities held of record by the selling stockholder and may be deemed to beneficially own the securities. Allan Reine is the portfolio manager of Lombard Odier Asset Management (USA) Corp. and as such has the power to vote or dispose of the securities held of record by the selling stockholder and may be deemed to beneficially own the securities. Mr. Reine disclaims beneficial ownership of such securities, except to the extent of his pecuniary interest therein.

(5) Includes 17,006 shares the selling stockholder has the right to acquire through the exercise of a common stock warrant and includes 23,500 shares owned by the selling stockholder that are not being offered in this offering. The selling stockholder is an affiliate of a broker-dealer that acted as a placement agent in the 2014 Private Placement.

(6) Allan Lipkowitz, the trustee of the selling stockholder, has the power to vote or dispose of the securities held of record by the selling stockholder and may be deemed to beneficially own those securities. Mr. Lipkowitz disclaims beneficial ownership with respect to such shares, except to the extent of his pecuniary interest therein, if any.

(7) O. Stuart Chase, the Headmaster Emeritus of the selling stockholder, has the power to vote or dispose of the securities held of record by the selling stockholder and may be deemed to beneficially own those securities. Mr. Chase disclaims beneficial ownership with respect to such shares, except to the extent of his pecuniary interest therein, if any.

(8) Includes 9,068 shares the selling stockholder has the right to acquire through the exercise of a common stock warrant. The selling stockholder is a broker-dealer that served as a sub-placement agent in the 2014 Private Placement. The selling stockholder is a corporation governed by a board of directors comprised of three directors. The members of the board of directors disclaim beneficial ownership with respect to such shares, except to the extent of their pecuniary interest therein, if any.

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- (9) Includes 4,534 shares the selling stockholder has the right to acquire through the exercise of a common stock warrant. The selling stockholder is an affiliate of a broker-dealer that acted as a sub-placement agent in the 2014 Private Placement.
- (10) Includes 35,000 shares the selling stockholder has the right to acquire through the exercise of a common stock warrant. The selling stockholder is a managing director of Northland Securities, Inc., which served as placement agent in the 2014 Private Placement and received approximately \$170,000 and warrants to purchase approximately 115,000 shares of our common stock, which were allocated to its affiliates, including the selling stockholder.
- (11) Professor Dr. Horst Domdey is the Chief Executive Officer of the selling stockholder has the power to vote or dispose of the securities held of record by the selling stockholder. Professor Dr. Domdey disclaims beneficial ownership of such securities, except to the extent of his pecuniary interest therein.
- (12) Professor Dr. Horst Domdey is the liquidator of the selling stockholder has the power to vote or dispose of the securities held of record by the selling stockholder. Professor Dr. Domdey disclaims beneficial ownership of such securities, except to the extent of his pecuniary interest therein.
- (13) Shaye Hirsch is the director of the selling stockholder and as such has the power to vote of dispose of the securities held of record by the selling stockholder and may be deemed to beneficially own those securities. Mr. Hirsch disclaims beneficial ownership with respect to such shares, except to the extent of his pecuniary interest therein, if any.
- (14) The selling stockholder is a public limited company with limited liability incorporated in India and is governed by a board of directors comprised of seven directors. The members of the board of directors disclaim beneficial ownership with respect to such shares, except to the extent of their pecuniary interest therein, if any.
- (15) Jong Tae Choi is the trustee of the selling stockholder and has the power to vote or dispose of the securities held of record by the selling stockholder and may be deemed to beneficially own those securities. Mr. Choi disclaims beneficial ownership with respect to such shares, except to the extent of his pecuniary interest therein, if any.
- (16) Includes 2,840 shares the selling stockholder has the right to acquire through the exercise of a common stock warrant. The selling stockholder is an affiliate of a broker-dealer that acted as a sub-placement agent in the 2014 Private Placement.
- (17) Includes 196,872 shares of our common stock underlying an option held by the selling stockholder and exercisable on or within 60 days following June 23, 2016 that are not being offered in this offering. The selling stockholder was the Chief Financial Officer of Pieris GmbH until December 17, 2014; he is currently the Vice-President of Finance of Pieris and has held this position since December 17, 2014.
- (18) The selling stockholder is an affiliate of a broker-dealer that did not participate in the 2014 Private Placement.
- (19) F. Martin Anson, the general partner of the selling stockholder, has the power to vote or dispose of the securities held of record by the selling stockholder and may be deemed to beneficially own those securities. Mr. Anson disclaims beneficial ownership with respect to such shares, except to the extent of his pecuniary interest therein, if any.
- (20) Malcom R. Currie, the trustee of the selling stockholder, has the power to vote or dispose of the securities held of record by the selling stockholder and may be deemed to beneficially own those securities. Mr. Currie disclaims beneficial ownership with respect to such shares, except to the extent of his pecuniary interest therein, if any.
- (21) David M. Rickey, the trustee of the selling stockholder, has the power to vote or dispose of the securities held of record by the selling stockholder and may be deemed to beneficially own those securities. Mr. Rickey disclaims beneficial ownership with respect to such shares, except to the extent of his pecuniary interest therein, if any.
- (22) Includes 21,319 shares the selling stockholder has the right to acquire through the exercise of a common stock warrant and 58,962 shares owned by the selling stockholder that are not being offered in this offering. The selling stockholder is an affiliate of a broker-dealer that acted as a sub-placement agent in the 2014 Private Placement.
- (23) Adam Passaglia, the manager of the selling stockholder, has the power to vote or dispose of the securities held of record by the selling stockholder and may be deemed to beneficially own those securities. Mr. Passaglia disclaims beneficial ownership with respect to such shares, except to the extent of his pecuniary interest therein, if any.

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- (24) Adam Passaglia, the manager of the selling stockholder, has the power to vote or dispose of the securities held of record by the selling stockholder and may be deemed to beneficially own those securities. Mr. Passaglia disclaims beneficial ownership with respect to such shares, except to the extent of his pecuniary interest therein, if any.
- (25) Robert S. Beadle, the President of the selling stockholder, has the power to vote or dispose of the securities held of record by the selling stockholder and may be deemed to beneficially own those securities. Mr. Beadle disclaims beneficial ownership with respect to such shares, except to the extent of his pecuniary interest therein, if any.
- (26) Includes 16,078 shares the selling stockholder has the right to acquire through the exercise of a common stock warrant and includes 5,000 shares owned by the selling stockholder that are not being offered in this offering. Barbara J. Glenns, the President of the selling stockholder has the power to vote or dispose of the securities held of record by the selling stockholder and may be deemed to beneficially own those securities. Ms. Glenns disclaims beneficial ownership with respect to such shares, except to the extent of her pecuniary interest therein, if any.
- (27) Includes 24,382 shares the selling stockholder has the right to acquire through the exercise of a common stock warrant and 63,176 shares owned by the selling stockholder that are not being offered in this offering. The selling stockholder is an affiliate of a broker-dealer that acted as a sub-placement agent in the 2014 Private Placement.
- (28) Samuel Belzberg, the Chairman and Chief Executive Officer of the selling stockholder, has the power to vote or dispose of the securities held of record by the selling stockholder and may be deemed to beneficially own those securities. Mr. Belzberg disclaims beneficial ownership with respect to such shares, except to the extent of his pecuniary interest therein, if any.
- (29) David Gubbay is the manager of the selling stockholder has the power to vote or dispose of the securities held of record by the selling stockholder and may be deemed to beneficially own those securities. Mr. Grubbay disclaims beneficial ownership with respect to such shares, except to the extent of his pecuniary interest therein, if any.
- (30) Pamela M. Baker is the manager of the selling stockholder has the power to vote or dispose of the securities held of record by the selling stockholder and may be deemed to beneficially own those securities. Ms. Baker disclaims beneficial ownership with respect to such shares, except to the extent of her pecuniary interest therein, if any.
- (31) Sphera Global Healthcare Management LP is in the investment manager of the selling stockholder. Doron Breen is the portfolio manager of Sphera Global Healthcare Management LP and exercises the power to vote or dispose of the securities held of record by the selling stockholder. Mr. Breen disclaims beneficial ownership of such securities, except to the extent of his pecuniary interest therein. The general partner of Sphera Global Healthcare Management LP is Sphera Global Healthcare GP Ltd., a company incorporated in Israel, which has four members on its board of directors. The members of the board of directors disclaim beneficial ownership with respect to such shares, except to the extent of their pecuniary interest therein, if any.
- (32) Includes 1,000 shares owned by the selling stockholder that are not being offered in this offering.
- (33) Includes 15,000 shares the selling stockholder has the right to acquire through the exercise of a common stock warrant. The selling stockholder is the Head of Investment Banking at Northland Securities, Inc., which served as placement agent in the 2014 Private Placement and received approximately \$170,000 and warrants to purchase approximately 100,000 shares of our common stock.
- (34) Joel L. Hochman, the trustee of the selling stockholder, has the power to vote or dispose of the securities held of record by the selling stockholder and may be deemed to beneficially own those securities. Mr. Hochman disclaims beneficial ownership with respect to such shares, except to the extent of his pecuniary interest therein, if any.
- (35) Includes 4,216 shares the selling stockholder has the right to acquire through the exercise of a common stock warrant. The selling stockholder is an affiliate of a broker-dealer that acted as a sub-placement agent in the 2014 Private Placement.
- (36) The selling stockholder is a public-law institution organized under the laws of the Federal Republic of Germany and is owned by the Federal Republic of Germany and by the 16 German states. Petra Röttcher, Vice President, and Markus Danhausen, Senior Investment Manager, have the power to vote or dispose of the securities held of record by the selling stockholder. Certain other persons affiliated with the selling stockholder may also have the power to vote or dispose of the securities held of record by the selling stockholder. No decision may be made by any of these individuals acting alone and each person with such authority disclaims beneficial ownership with respect to such shares, except to the extent of his or her pecuniary interest therein, if any.

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- (37) Includes 629 shares the selling stockholder has the right to acquire through the exercise of a common stock warrant. The selling stockholder is an affiliate of a broker-dealer that acted as a sub-placement agent in the 2014 Private Placement.
- (38) Lee J. Seidler, the trustee of the selling stockholder, has the power to vote or dispose of the securities held of record by the selling stockholder and may be deemed to beneficially own those securities. Mr. Seidler disclaims beneficial ownership with respect to such shares, except to the extent of his pecuniary interest therein, if any.
- (39) Includes 464 shares the selling stockholder has the right to acquire through the exercise of a common stock warrant. The selling stockholder is an affiliate of a broker-dealer that acted as a sub-placement agent in the 2014 Private Placement.
- (40) Lon E. Bell, the trustee of the selling stockholder, has the power to vote or dispose of the securities held of record by the selling stockholder and may be deemed to beneficially own those securities. Mr. Bell disclaims beneficial ownership with respect to such shares, except to the extent of his pecuniary interest therein, if any.
- (41) Dr. Martin Pöhlchen is the managing director of the selling stockholder has the power to vote or dispose of the securities held of record by the selling stockholder. Dr. Pöhlchen disclaims beneficial ownership of such securities, except to the extent of his pecuniary interest therein.
- (42) WT Director Limited is the controlling entity of the selling stockholder. Each of Paul Conway and Du Preez Vermeulen, authorized signatories of WT Director Limited, has the power to vote or dispose of the securities held of record by the selling stockholder and may be deemed to beneficially own those securities. Messrs. Conway and Vermeulen disclaim beneficial ownership of such securities, except to the extent of his pecuniary interest therein.
- (43) Steven Evans, the trustee of the selling stockholder, has the power to vote or dispose of the securities held of record by the selling stockholder and may be deemed to beneficially own those securities. Mr. Evans disclaims beneficial ownership with respect to such shares, except to the extent of his pecuniary interest therein, if any.
- (44) Includes 61,064 shares the selling stockholder has the right to acquire through the exercise of a common stock warrant. The selling stockholder is an affiliate of a broker-dealer that acted as a placement agent in the 2014 Private Placement.
- (45) Includes 50,000 shares the selling stockholder has the right to acquire through the exercise of a common stock warrant. The selling stockholder is a broker-dealer who served as placement agent in the 2014 Private Placement and received approximately \$170,000 and warrants to purchase approximately 100,000 shares of our common stock, 50,000 of which were allocated to its affiliates. The selling stockholder is a corporation governed by a board of directors comprised of three directors. The members of the board of directors disclaim beneficial ownership with respect to such shares, except to the extent of their pecuniary interest therein, if any.
- (46) John Abeles, the manager of the general partner of the selling stockholder, has the power to vote or dispose of the securities held of record by the selling stockholder and may be deemed to beneficially own those securities. Mr. Abeles disclaims beneficial ownership with respect to such shares, except to the extent of his pecuniary interest therein, if any.
- (47) The selling stockholder is a corporation governed by a board of directors comprised of 11 directors. The members of the board of directors disclaim beneficial ownership with respect to such shares, except to the extent of their pecuniary interest therein, if any.
- (48) OrbiMed Capital GP III LLC, or GP III, is the sole general partner of OrbiMed Private Investments III, LP and, as such, may be deemed to indirectly beneficially own the shares held by OrbiMed Private Investments III, LP. OrbiMed Advisors LLC, or OrbiMed, is the general partner of OrbiMed Associates III, LP and the sole managing member of GP III and, as such, OrbiMed may be deemed to indirectly beneficially own the shares held by OrbiMed Private Investments III, LP and OrbiMed Associates III, LP. Samuel D. Isaly is the managing member of, and owner of a controlling interest in, OrbiMed. Accordingly, OrbiMed and Mr. Isaly may be deemed to have voting and investment power over the shares held by OrbiMed Private Investments III, LP and OrbiMed Associates III, LP. GP III, OrbiMed and Mr. Isaly disclaim beneficial ownership with respect to such shares, except to the extent of their pecuniary interest therein, if any. Chau Khuong is an employee of OrbiMed Advisors LLC and is its designee to the Company's Board of Directors pursuant to an agreement between the Company and investment funds affiliated with OrbiMed. Mr. Khuong replaced Michael Sheffery, a former Member of OrbiMed Advisors LLC, on the Company's Board in 2014.

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- (49) Includes 8,039 shares the selling stockholder has the right to acquire through the exercise of a common stock warrant. The selling stockholder is the president of Katalyst Securities, LLC, which served as placement agent in the 2014 Private Placement and which received approximately \$491,000 and warrants to purchase approximately 245,630 shares of our common stock, which were allocated to its affiliates, including the selling stockholder.
- (50) Includes 8,039 shares the selling stockholder has the right to acquire through the exercise of a common stock warrant. The selling stockholder is an owner of 50% of Katalyst Securities, LLC, which served as placement agent in the 2014 Private Placement and which received approximately \$491,000 and warrants to purchase approximately 245,630 shares of our common stock, which were allocated to its affiliates, including the selling stockholder.
- (51) Prof. Dr. Arne Skerra has the power to vote or dispose of the securities held of record by the selling stockholder and may be deemed to beneficially own those securities. Prof. Dr. Skerra is a former member of the advisory board of Pieris GmbH and currently serves as a consultant to Pieris.
- (52) Includes 5,000 shares the selling stockholder has the right to acquire through the exercise of a common stock warrant. The selling stockholder is an affiliate of a broker-dealer that acted as a placement agent in the 2014 Private Placement.
- (53) Includes 9,400 shares the selling stockholder has the right to acquire through the exercise of a common stock warrant. The selling stockholder is a registered investment advisory firm, which utilizes a broker-dealer that acted as a placement agent in the 2014 Private Placement for broker-dealer services. Philip Rabinovich, the managing member and principal shareholder of the selling stockholder, has the power to vote or dispose of the securities held of record by the selling stockholder and may be deemed to beneficially own those securities; he is also a registered representative of a sub-placement agent in the 2014 Private Placement.
- (54) Includes 57,862 shares the selling stockholder has the right to acquire through the exercise of a common stock warrant. The selling stockholder is an affiliate of a broker-dealer that acted as a sub-placement agent in the 2014 Private Placement.
- (55) Includes 10,000 shares the selling stockholder has the right to acquire through the exercise of a common stock warrant. The selling stockholder is an affiliate of a broker-dealer that acted as a placement agent in the 2014 Private Placement.
- (56) Includes 6,496 shares the selling stockholder has the right to acquire through the exercise of a common stock warrant. The selling stockholder is an affiliate of a broker-dealer that acted as a placement agent in the 2014 Private Placement.
- (57) Includes 10,098 shares the selling stockholder has the right to acquire through the exercise of a common stock warrant and includes 13,892 shares owned by the selling stockholder that are not being offered in this offering. The selling stockholder is an affiliate of a broker-dealer that acted as a sub-placement agent in the 2014 Private Placement.
- (58) The selling stockholder is a corporation with a four-member board of directors; the selling stockholder has delegated investment discretion to Sphera Global Healthcare Management LP (“Sphera LP”), which serves as the investment manager of the selling stockholder. Doron Breen is the portfolio manager of Sphera LP and exercises the power to vote or dispose of the securities held of record by the selling stockholder. Mr. Breen disclaims beneficial ownership of such securities, except to the extent of his pecuniary interest therein. The general partner of Sphera LP is Sphera Global Healthcare GP Ltd., a company incorporated in Israel, which has four members on its board of directors.
- (59) Includes 61,064 shares the selling stockholder has the right to acquire through the exercise of a common stock warrant, 12,500 shares that were purchased by the selling stockholder in the 2014 Private Placement and 147,503 shares owned by the selling stockholder that are not being offered in this offering. The selling stockholder is an affiliate of a broker-dealer that acted as a placement agent in the 2014 Private Placement.
- (60) The general partner of the selling stockholder is Technologie Beteiligungsfonds Bayern Verwaltungs GmbH (“TBBV”), a limited liability company. The managing directors of TBBV are Roman Huber and Dr. Georg Ried and the authorized officers of TBBV are Monika Steger, Klaus Löschner and Rosi Keimerl. Both managing directors acting together or one managing director and one authorized officer acting together have the power to vote or dispose of the securities held of record by the selling stockholder. Each of the managing directors and the authorized officers disclaims beneficial ownership of the securities of the selling stockholder, except to the extent of his or her pecuniary interest therein, if any.

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- (61) Robert B. Prag, the trustee of the selling stockholder, has the power to vote or dispose of the securities held of record by the selling stockholder and disclaims beneficial ownership of such securities, except to the extent of his pecuniary interest therein.
- (62) Includes 10,603 shares the selling stockholder has the right to acquire through the exercise of a common stock warrant and includes 17,086 shares owned by the selling stockholder that are not being offered in this offering. The selling stockholder is an affiliate of a broker-dealer that acted as a sub-placement agent in the 2014 Private Placement.
- (63) Includes 14,159 shares the selling stockholder has the right to acquire through the exercise of a common stock warrant and includes 23,384 shares owned by the selling stockholder that are not being offered in this offering. The selling stockholder is an affiliate of a broker-dealer that acted as a sub-placement agent in the 2014 Private Placement.
- (64) The sole and fully authorized representative of the selling stockholder is Alexander von Mellenthin. Mr. von Mellenthin has the power to vote or dispose of the securities held of record by the selling stockholder. The sole stockholders of the selling stockholder and beneficial owners of the securities of record held by the selling stockholder are Dr. Stephan Goetz, Stefan Sanktjohanser, and Alexander von Mellenthin.
- (65) Includes 80,000 shares the selling stockholder has the right to acquire through the exercise of a common stock warrant. The selling stockholder is a broker-dealer who served as a sub-placement agent in the 2014 Private Placement. The selling stockholder is a limited liability company whose managing member and CEO is Jonathan Fassberg. Accordingly, Mr. Fassberg may be deemed to have voting and investment power over the shares held by the selling stockholder. Mr. Fassberg disclaims beneficial ownership with respect to such shares, except to the extent of their pecuniary interest therein, if any.

PLAN OF DISTRIBUTION

We are registering the shares of common stock issued to the selling stockholders to permit the resale of these shares of common stock by the holders of the shares of common stock from time to time after the date of this prospectus. We will not receive any of the proceeds from the sale by the selling stockholders of the shares of common stock. We will bear all fees and expenses incident to our obligation to register the shares of common stock.

The selling stockholders may sell all or a portion of the shares of common stock beneficially owned by them and offered hereby from time to time directly or through one or more underwriters, broker-dealers or agents. If the shares of common stock are sold through underwriters or broker-dealers, the selling stockholders will be responsible for underwriting discounts or commissions or agent's commissions. The shares of common stock may be sold in one or more transactions, which may involve crosses or block transactions, and may be sold on any national securities exchange or quotation service on which our common stock may be listed or quoted at the time of sale, in the over-the-counter market, or in transactions otherwise than on these exchanges or systems. Sales of the common stock to be registered hereunder could be made at prevailing market prices at the time of the sale, at fixed prices, at negotiated prices, or at varying prices determined at the time of sale. As a result, we cannot know the price at which any of our common stock to be registered hereunder may ultimately be sold by the holders thereof.

The selling stockholders may use any one or more of the following methods when selling shares:

- ordinary brokerage transactions and transactions in which the broker-dealer solicits purchasers;
- block trades in which the broker-dealer will attempt to sell the shares as agent but may position and resell a portion of the block as principal to facilitate the transaction;
- purchases by a broker-dealer as principal and resale by the broker-dealer for its account;
- an exchange distribution in accordance with the rules of the applicable exchange;
- privately negotiated transactions;
- settlement of short sales entered into after the effective date of the registration statement of which this prospectus is a part;
- broker-dealers may agree with the selling stockholders to sell a specified number of such shares at a stipulated price per share;
- through the writing or settlement of options or other hedging transactions, whether such options are listed on an options exchange or otherwise;
- a combination of any such methods of sale; and
- any other method permitted pursuant to applicable law.

The selling stockholders also may resell all or a portion of the shares in open market transactions in reliance upon Rule 144 under the Securities Act, as permitted by that rule, or Section 4(a)(1) under the Securities Act, if available, rather than under this prospectus, provided that they meet the criteria and conform to the requirements of those provisions, including the requirements of Rule 144(i) applicable to former "shell companies."

Broker-dealers engaged by the selling stockholders may arrange for other broker-dealers to participate in sales. If the selling stockholders effect such transactions by selling shares of common stock to or through underwriters, broker-dealers or agents, such underwriters, broker-dealers or agents may receive commissions in the form of discounts, concessions or commissions from the selling stockholders or commissions from purchasers of the shares of common stock for whom they may act as agent or to whom they may sell as principal. Such commissions will be in amounts to be negotiated, but, except as set forth in a supplement to this prospectus, in the case of an agency transaction will not be in excess of a customary brokerage commission in compliance with FINRA Rule 5110.

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In connection with sales of the shares of common stock or otherwise, the selling stockholders may enter into hedging transactions with broker-dealers or other financial institutions, which may in turn engage in short sales of the shares of common stock in the course of hedging in positions they assume. The selling stockholders may also sell shares of common stock short and if such short sale shall take place after the date that this registration statement is declared effective by the SEC, the selling stockholders may deliver shares of common stock covered by this prospectus to close out short positions and to return borrowed shares in connection with such short sales. The selling stockholders may also loan or pledge shares of common stock to broker-dealers that in turn may sell such shares, to the extent permitted by applicable law. The selling stockholders may also enter into option or other transactions with broker-dealers or other financial institutions or the creation of one or more derivative securities which require the delivery to such broker-dealer or other financial institution of shares offered by this prospectus, which shares such broker-dealer or other financial institution may resell pursuant to this prospectus (as supplemented or amended to reflect such transaction). Notwithstanding the foregoing, the selling stockholders have been advised that they may not use shares registered pursuant to this registration statement to cover short sales of our common stock made prior to the date the registration statement of which this prospectus forms a part is declared effective by the SEC.

The selling stockholders may, from time to time, pledge or grant a security interest in some or all of the shares of common stock owned by them and, if they default in the performance of their secured obligations, the pledgees or secured parties may offer and sell the shares of common stock from time to time pursuant to this prospectus or any amendment to this prospectus under Rule 424(b)(3) or other applicable provision of the Securities Act, amending, if necessary, the list of selling stockholders to include the pledgee, transferee or other successors in interest as selling stockholders under this prospectus. The selling stockholders also may transfer and donate the shares of common stock in other circumstances in which case the transferees, donees, pledgees or other successors in interest will be the selling beneficial owners for purposes of this prospectus.

The selling stockholders and any broker-dealer or agents participating in the distribution of the shares of common stock offered hereby may be deemed to be “underwriters” within the meaning of Section 2(11) of the Securities Act in connection with such sales. In such event, any commissions paid, or any discounts or concessions allowed to, any such broker-dealer or agent and any profit on the resale of the shares purchased by them may be deemed to be underwriting commissions or discounts under the Securities Act. Selling stockholders who are “underwriters” within the meaning of Section 2(11) of the Securities Act will be subject to the prospectus delivery requirements of the Securities Act and may be subject to certain statutory liabilities of, including but not limited to, Sections 11, 12 and 17 of the Securities Act and Rule 10b-5 under the Exchange Act.

Each selling stockholder has informed us that it is not a registered broker-dealer and does not have any written or oral agreement or understanding, directly or indirectly, with any person to distribute the common stock. Upon us being notified in writing by a selling stockholder that any material arrangement has been entered into with a broker-dealer for the sale of common stock through a block trade, special offering, exchange distribution or secondary distribution or a purchase by a broker-dealer, a supplement to this prospectus will be filed, if required, pursuant to Rule 424(b) under the Securities Act, disclosing (i) the name of each such selling stockholder and of the participating broker-dealer(s), (ii) the number of shares involved, (iii) the price at which such the shares of common stock were sold, (iv) the commissions paid or discounts or concessions allowed to such broker-dealer(s), where applicable, (v) that such broker-dealer(s) did not conduct any investigation to verify the information set out or incorporated by reference in this prospectus, and (vi) other facts material to the transaction. In no event shall any broker-dealer receive fees, commissions and markups, which, in the aggregate, would exceed eight percent (8%).

Under the securities laws of some states, the shares of common stock may be sold in such states only through registered or licensed brokers or dealers. In addition, in some states the shares of common stock may not be sold unless such shares have been registered or qualified for sale in such state or an exemption from registration or qualification is available and is complied with in all respects.

Any selling stockholder may sell some, all or none of the shares of common stock to be registered pursuant to the registration statement of which this prospectus forms a part.

Each selling stockholder and any other person participating in such distribution will be subject to applicable provisions of the Exchange Act and the rules and regulations thereunder, including, without limitation, Regulation M of the Exchange Act, which may limit the timing of purchases and sales of any of the shares of common stock by the selling stockholder and any other participating person. Regulation M may also restrict the ability of any person engaged in the distribution of the shares of common stock to engage in market-making activities with respect to the shares of common stock. All of the foregoing may affect the marketability of the shares of common stock and the ability of any person or entity to engage in market-making activities with respect to the shares of common stock.

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We will pay all expenses of the registration of the shares of common stock pursuant to the 2014 Private Placement Registration Rights Agreement, including, without limitation, SEC filing fees and expenses of compliance with state securities or “blue sky” laws; *provided, however*, that each selling stockholder will pay all underwriting discounts and selling commissions, if any, and any legal expenses incurred by it. We will indemnify the selling stockholders against certain liabilities, including some liabilities under the Securities Act, in accordance with the 2014 Private Placement Registration Rights Agreement, or the selling stockholders will be entitled to contribution. We may be indemnified by the selling stockholders against civil liabilities, including liabilities under the Securities Act, that may arise from any written information furnished to us by the selling stockholders specifically for use in this prospectus, in accordance with the 2014 Private Placement Registration Rights Agreement, or we may be entitled to contribution.

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LEGAL MATTERS

The validity of the common stock being offered by this prospectus is being passed upon by Mintz, Levin, Cohn, Ferris, Glovsky and Popeo, P.C.

EXPERTS

The consolidated financial statements of Pieris Pharmaceuticals, Inc appearing in Pieris Pharmaceuticals, Inc.'s, Annual Report on Form 10-K, as amended, at December 31, 2015 and 2014, and for each of the two years in the period ended December 31, 2015, have been audited by Ernst & Young GmbH Wirtschaftsprüfungsgesellschaft, independent registered public accounting firm, as set forth in their report thereon, incorporated by reference therein, and incorporated herein by reference. Such consolidated financial statements are incorporated herein by reference in reliance upon such reports given on the authority of such firm as experts in accounting and auditing.

WHERE YOU CAN FIND ADDITIONAL INFORMATION

We are subject to the reporting requirements of the Securities Exchange Act of 1934, as amended, and file annual, quarterly and current reports, proxy statements and other information with the SEC. You may read and copy these reports, proxy statements and other information at the SEC's public reference facilities at 100 F Street, N.E., Room 1580, Washington, D.C. 20549. You can request copies of these documents by writing to the SEC and paying a fee for the copying cost. Please call the SEC at 1-800-SEC-0330 for more information about the operation of the public reference facilities. SEC filings are also available at the SEC's web site at <http://www.sec.gov>.

This prospectus is only part of a registration statement on Form S-3 that we have filed with the SEC under the Securities Act and therefore omits certain information contained in the registration statement. We have also filed exhibits and schedules with the registration statement that are excluded from this prospectus, and you should refer to the applicable exhibit or schedule for a complete description of any statement referring to any contract or other document. You may inspect a copy of the registration statement, including the exhibits and schedules, without charge, at the public reference room or obtain a copy from the SEC upon payment of the fees prescribed by the SEC.

We also maintain a website at www.pieris.com, through which you can access our SEC filings. The information set forth on our website is not part of this prospectus.

INFORMATION INCORPORATED BY REFERENCE

The SEC allows us to "incorporate by reference" into this prospectus information that we have filed with the SEC. This means we can disclose important information to you by referring you to other documents that contain that information. The information incorporated by reference is considered part of this prospectus. We incorporate by reference the documents listed below:

- (1) Our Annual Report on Form 10-K for the fiscal year ended December 31, 2015 that we filed with the SEC on March 23, 2016.
- (2) Amendment No. 1 to our Annual Report on Form 10-K/A for the fiscal year ended December 31, 2015 that we filed with the SEC on April 29, 2016.
- (3) Amendment No. 2 to our Annual Report on Form 10-K/A for the fiscal year ended December 31, 2015 that we filed with the SEC on July 20, 2016.
- (4) Our Quarterly Report on Form 10-Q for the quarterly period ended March 31, 2016 that we filed with the SEC on May 12, 2016.
- (5) Amendment No. 1 to our Quarterly Report on Form 10-Q/A for the quarterly period ended March 31, 2016 that we filed with the SEC on July 20, 2016.

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- (6) The Current Reports on Form 8-K, each of which were filed with the SEC (except for the information furnished under Items 2.02 or 7.01 and the exhibits furnished thereto) on the following dates:
- April 7, 2016;
 - April 18, 2016 (with respect to two reports filed on such date);
 - May 12, 2016;
 - June 6, 2016 (with respect to two reports filed on such date);
 - June 8, 2016;
 - June 9, 2016;
 - July 1, 2016; and
 - July 26, 2016.
- (7) The description of our common stock contained in our Registration Statement on Form 8-A filed on June 24, 2015, including any amendment or report filed for the purpose of updating such description.
- (8) All reports and other documents subsequently filed by us pursuant to Sections 13(a), 13(c), 14 and 15(d) of the Exchange Act after the date of the registration statement to which this prospectus forms a part of and prior to the effectiveness of such registration statement or after the date of this prospectus and prior to the termination or completion of the offering of securities under this prospectus shall be deemed to be incorporated by reference in this prospectus and to be a part hereof from the date of filing such reports and other documents.

The SEC file number for each of the documents listed above is 001-37471.

Any statement contained in this prospectus or in a document incorporated or deemed to be incorporated by reference into this prospectus will be deemed to be modified or superseded for purposes of this prospectus to the extent that a statement contained in this prospectus or any other subsequently filed document that is deemed to be incorporated by reference into this prospectus modifies or supersedes the statement. Any statements so modified or superseded shall not be deemed, except as so modified or superseded, to constitute a part of this prospectus.

You may request a copy of these documents, orally or in writing, which will be provided to you at no cost, by contacting:

Pieris Pharmaceuticals, Inc.
255 State Street, 9th Floor
Boston, Massachusetts 02109
Attention: Investor Relations
Telephone: +1 (857) 246-8998

PIERIS PHARMACEUTICALS, INC.

15,250,634 Shares of Common Stock

PROSPECTUS

Dated August 4, 2016