

Penumbra Inc
Form 424B5
March 17, 2017
[Table of Contents](#)

Filed Pursuant to Rule 424(b)(5)
Registration No. 333-216678

CALCULATION OF REGISTRATION FEE

Title of Each Class of Securities to be Registered	Amount To Be Registered	Maximum Offering Price per Share	Maximum Aggregate Offering	Amount of Registration Fee(1)
Common Stock, \$0.001 par value per share	1,495,000	\$76.00	\$113,620,000	\$13,168.56

(1) Calculated in accordance with Rule 457(r) under the Securities Act.

Table of Contents**PROSPECTUS SUPPLEMENT****(To Prospectus dated March 14, 2017)****1,300,000 Shares*****Common stock***

We are offering 1,300,000 shares of our common stock. Our common stock is listed on the New York Stock Exchange (NYSE), under the symbol PEN. The last reported sale price of our common stock on the NYSE on March 16, 2017 was \$77.55.

	Per Share	Total
Public offering price	\$ 76.00	\$ 98,800,000
Underwriting discounts and commissions ⁽¹⁾	\$ 4.56	\$ 5,928,000
Proceeds to us, before expenses	\$ 71.44	\$ 92,872,000

(1) See Underwriting for additional disclosure regarding underwriting discounts, commissions and estimated offering expenses.

We have granted the underwriters the option to purchase up to an additional 195,000 shares of our common stock from us at the public offering price less underwriting discounts and commissions. The underwriters can exercise this option at any time within 30 days after the date of this prospectus supplement.

Investing in our common stock involves a high degree of risk. See Risk Factors beginning on page S-9 of this prospectus supplement and page 17 of our Annual Report on Form 10-K for the year ended December 31, 2016, which is incorporated by reference into this prospectus supplement.

Neither the Securities and Exchange Commission nor any state securities commission has approved or disapproved of these securities or passed upon the accuracy or adequacy of this prospectus supplement. Any representation to the contrary is a criminal offense.

The underwriters expect to deliver the shares of common stock to investors on or about March 22, 2017.

J.P. Morgan**BofA Merrill Lynch**

Wells Fargo Securities

March 16, 2017

Canaccord Genuity

Table of Contents

Prospectus supplement

TABLE OF CONTENTS

	Page
<u>About this Prospectus Supplement</u>	S-ii
<u>Prospectus Supplement Summary</u>	S-1
<u>Risk Factors</u>	S-9
<u>Special Note Regarding Forward-Looking Statements</u>	S-11
<u>Use of Proceeds</u>	S-12
<u>Price Range of Our Common Stock</u>	S-13
<u>Dividend Policy</u>	S-14
<u>Capitalization</u>	S-15
<u>Material U.S. Federal Income and Estate Tax Consequences for Non-U.S. Holders of Common Stock</u>	S-17
<u>Underwriting</u>	S-20
<u>Legal Matters</u>	S-26
<u>Experts</u>	S-26
<u>Where You Can Find More Information</u>	S-26
Prospectus	

TABLE OF CONTENTS

	Page
<u>The Company</u>	1
<u>Where You Can Find More Information</u>	2
<u>Special Note On Forward-Looking Statements</u>	3
<u>Use of Proceeds</u>	4
<u>Ratio of Earnings to Fixed Charges</u>	4
<u>Description of Capital Stock</u>	5
<u>Description of Depositary Shares Representing Preferred Stock</u>	11
<u>Description of Debt Securities</u>	11
<u>Description of Warrants</u>	20
<u>Description of Purchase Contracts</u>	21
<u>Description of Units</u>	21
<u>Forms of Securities</u>	22
<u>Selling Securityholders</u>	24
<u>Validity of Securities</u>	24
<u>Experts</u>	24

S-i

Table of Contents

ABOUT THIS PROSPECTUS SUPPLEMENT

This document is in two parts. The first part is this prospectus supplement, which describes the terms of this offering of common stock and also adds to and updates information contained in the accompanying prospectus and the documents incorporated by reference into this prospectus supplement and the accompanying prospectus. The second part, the accompanying prospectus, provides more general information about our common stock. To the extent the information contained in this prospectus supplement differs or varies from the information contained in the accompanying prospectus or the documents incorporated by reference, you should rely on the information in this prospectus supplement. Generally, when we refer to the prospectus, we are referring to this prospectus supplement and the accompanying prospectus combined.

In this prospectus supplement, Penumbra, Penumbra, Inc., the Company, we, us and our refer to Penumbra, Inc. and its consolidated subsidiaries. We and the underwriters have not authorized anyone to provide any information or to make any representations other than those contained in this prospectus supplement, the accompanying prospectus or in any free writing prospectuses we have prepared. We and the underwriters take no responsibility for, and can provide no assurance as to the reliability of, any other information that others may provide you. We are offering to sell, and seeking offers to buy, shares of common stock only in jurisdictions where offers and sales are permitted. The information contained in this prospectus supplement and the accompanying prospectus is accurate only as of the date of this prospectus supplement and the accompanying prospectus, respectively, regardless of the time of delivery of this prospectus supplement or the accompanying prospectus, or of any sale of the common stock.

This prospectus supplement includes industry and market data that we obtained from industry publications, internal estimates and other third-party sources. These sources may include government and industry sources. Industry publications and surveys generally state that the information contained therein has been obtained from sources believed to be reliable. Although we believe the industry and market data to be reliable as of the date of this prospectus supplement, this information could prove to be inaccurate. Industry and market data could be wrong because of the method by which sources obtained their data and because information cannot always be verified with complete certainty due to the limits on the availability and reliability of raw data, the voluntary nature of the data gathering process and other limitations and uncertainties. In addition, we do not know all of the assumptions regarding general economic conditions or growth that were used in preparing the forecasts from the sources relied upon or cited herein.

Table of Contents

PROSPECTUS SUPPLEMENT SUMMARY

This summary highlights the information contained in or incorporated by reference into this prospectus supplement. This summary provides an overview of selected information and does not contain all of the information you should consider before buying our common stock. Therefore, you should read the entire prospectus supplement and the accompanying prospectus carefully, especially the Risk Factors section beginning on page S-9 of this prospectus supplement and incorporated by reference beginning on page 17 of our Annual Report on Form 10-K for the year ended December 31, 2016, and our consolidated financial statements and the related notes that are incorporated by reference herein, before deciding to invest in our common stock.

Overview

Penumbra is a global healthcare company focused on interventional therapies. We design, develop, manufacture and market innovative devices and have a broad portfolio of products that addresses challenging medical conditions and significant clinical needs across two major markets, neuro and peripheral vascular. The conditions that our products address include, among others, ischemic stroke, hemorrhagic stroke and various peripheral vascular conditions that can be treated through thrombectomy and embolization procedures.

Our team focuses on developing, manufacturing and marketing products for use by specialist physicians, including interventional neuroradiologists, neurosurgeons, interventional neurologists, interventional radiologists and vascular surgeons. We design our products to provide these specialist physicians with a means to drive improved clinical outcomes.

Since our founding in 2004, we have had a strong track record of organic product development and commercial expansion that has established the foundation of our global organization. Some of our selected accomplishments include:

launching our first product, for neurovascular access, in the United States in 2007;

establishing our direct neuro salesforce in the United States and Europe in 2008;

launching the first U.S. Food and Drug Administration (FDA)-cleared, aspiration catheter for the treatment of ischemic stroke patients in 2008, and launching five subsequent generations of that product;

launching our first neurovascular coil for the treatment of brain aneurysms in 2011;

launching our first peripheral vascular product in 2013;

establishing our direct peripheral vascular salesforce in the United States and Europe in 2014; and

launching our first peripheral thrombectomy products for the treatment of venous disease in 2015.

We attribute our success to our culture built on cooperation, our highly efficient product innovation process, our disciplined approach to product and commercial development, our deep understanding of our target end markets and our relationships with specialist physicians. We believe these factors have enabled us to rapidly innovate in a highly capital-efficient manner.

We sell our products to hospitals primarily through our direct sales organization in the United States, most of Europe, Canada and Australia, as well as through distributors in select international markets. We generated revenue of \$263.3 million, \$186.1 million and \$125.5 million for the years ended December 31, 2016, 2015 and 2014, respectively. This represents annual increases of 41.5% and 48.3%, respectively. We generated an operating loss of \$1.4 million for the year ended December 31, 2016 and operating income of \$4.2 million and \$3.0 million for the years ended December 31, 2015 and 2014, respectively.

S-1

Table of Contents

Our Markets

We concentrate on improving treatment outcomes for patients with certain forms of vascular disease. Vascular disease refers to any condition that affects the circulatory system and typically manifests as a blockage or rupture of an artery or a vein. When the treatment for vascular disease is performed from within a vessel, it is referred to as an endovascular procedure. Endovascular device markets are conventionally classified according to the anatomic location of the disorder, and are generally divided into neurovascular, peripheral vascular and cardiovascular. We currently operate in the neuro and peripheral vascular markets. In both of these markets, our main product technologies include thrombectomy devices to remove clots and embolization devices to treat aneurysms and to occlude vessels.

While reliable third party data is not available for markets outside the United States, we believe that there is a substantial additional market for our neuro and peripheral vascular products in the rest of the world.

The Neuro Market

The neuro market is comprised of vascular diseases and disorders in the brain, including ischemic stroke, hemorrhagic stroke, brain aneurysms and other conditions. The American Heart Association (AHA) and the American Stroke Association (ASA) estimate that in 2013 the worldwide prevalence of all forms of stroke was 25.7 million and stroke was a leading cause of serious long-term disability and the second-leading cause of death. In the United States, the AHA and ASA estimate that approximately 795,000 strokes occur annually, and stroke is the leading cause of serious long-term disability. The AHA and ASA estimate that in 2013 stroke was the fifth leading cause of death in the United States. On average, every 40 seconds, someone in the United States suffers stroke, and someone dies of a stroke approximately every four minutes. According to the AHA and ASA, total direct and indirect costs of stroke in the United States were approximately \$105 billion in 2012 and are projected to reach \$240 billion by 2030.

The principal neuro markets that we operate in are:

Ischemic Stroke: Ischemic strokes, caused by the blockage of an artery in the brain, represent approximately 87% of strokes, or approximately 690,000 patients annually, in the United States. Of these cases, we estimate more than 150,000 are treatable with mechanical thrombectomy, which involves removal of the clot causing the blockage by mechanical means and restoring blood flow to the blocked vessels. Studies have shown that patients treated with mechanical thrombectomy had improved functional outcomes compared with treatment with clot-busting drugs such as tPA alone. We estimate that 17,000 patients in the United States were treated with mechanical thrombectomy in 2015.

Brain Aneurysm: An aneurysm is a weak area in a blood vessel that usually enlarges and is often described as a ballooning of the blood vessel. According to the AHA and ASA, approximately 1.5% to 5.0% of the general population has or will develop a brain aneurysm and about 3 to 5 million people in the United States may currently have a brain aneurysm. If a patient has had an aneurysm, there is a 15% to 20% likelihood that the patient will have one or more additional aneurysms. The primary endovascular procedure for treating unruptured aneurysms uses a repair technique called embolization, in which the aneurysm is packed with coils in a minimally invasive procedure. Based on independent market research, in 2015, there were approximately 45,000 brain aneurysm procedures in the United States, of which approximately 35,000 were endovascularly treated.

Hemorrhagic Stroke: Hemorrhagic strokes are caused by the sudden rupture of a brain artery that leads to bleeding into or around the brain. Brain aneurysms and arteriovenous malformations (AVMs) can both cause hemorrhagic stroke. According to independent sources, every year 0.05% to 0.5% of people with a brain aneurysm and 1.0% to 3.0% of people with an AVM may suffer from bleeding. Once an aneurysm or an AVM bleeds, the chance of death is 30-40% and 10-15%, respectively. Intracerebral

S-2

Table of Contents

hemorrhage (ICH), a type of hemorrhagic stroke, occurs when a vessel within the brain bursts, allowing blood to leak inside the brain. There are an estimated 65,000-80,000 cases of ICH in the United States each year.

In addition to products specifically addressing these disease states, we operate in the market for neuro access products, which facilitate the delivery of interventional treatments in the brain.

The Peripheral Vascular Market

Peripheral vascular diseases are vascular diseases occurring in vessels outside of the brain or heart. Peripheral vascular diseases are very similar to those experienced in the neurovasculature. Just as the disruption of blood flow to the brain has high mortality and morbidity, disruptions in the peripheral vasculature can also have serious adverse consequences.

The principal peripheral markets that we operate in are:

Peripheral Thrombectomy: There are more than one million incidences of clot in the peripheral vasculature each year in the United States and we estimate that approximately 150,000 are interventionally treated.

Venous Thromboembolism (VTE): Deep Vein Thrombosis, (DVT) and Pulmonary Embolism (PE) are collectively referred to as VTE. DVT occurs when a blood clot develops in veins deep in the body and PE occurs when a blood clot becomes lodged in the lung. DVT can result in PE if a blood clot in the leg breaks loose and travels to the lungs. According to the Centers for Disease Control and Prevention (CDC), up to 900,000 people are affected by VTE each year in the United States, of which we estimate up to 600,000 are incidences of DVT. It is estimated that one-third of people with VTE will have a recurrence within 10 years, and it is estimated that there are more than 100,000 VTE-related deaths in the United States annually.

Peripheral Artery Occlusion (PAO): PAO occurs when a blood clot develops in major peripheral arteries. We estimate that there are approximately 175,000 incidences of PAO each year in the United States.

Peripheral Embolization: Coil embolization is used to treat numerous conditions in the peripheral vasculature including aneurysms, hemorrhage, endoleaks and varicoceles. Based on independent market research, in 2015 there were approximately 45,000 peripheral vascular embolization coil procedures in the United States. We estimate that one-third of coils used in the United States are detachable coils, with the remainder being pushable coils.

Table of Contents**Our Product Portfolio**

Since our founding in 2004 we have developed a product portfolio including 16 product brands in 6 product families within two major markets. The following table summarizes our product offerings.

Product Families			Key Product Brands	Descriptions
NEURO	Neurovascular Access		Neuron	Neurovascular access systems designed to provide intracranial access for use in a wide range of neurovascular therapies
			Neuron MAX	
			Select	
			BENCHMARK	
			DDC	
			PX SLIM	
	Neuro Thrombectomy (Ischemic Stroke)		Velocity	Aspiration based thrombectomy systems and accessory devices
			Penumbra System, including ACE	
			3D	
			(investigational device)	Revascularization device designed for mechanical thrombectomy

**PERIPHERAL
VASCULAR**

Neurovascular Embolization (Brain Aneurysms)	Penumbra Coil 400	Neurovascular embolization coiling system designed to treat patients with large aneurysms and other large neurovascular lesions
	Penumbra SMART COIL	Neurovascular embolization coiling system designed to treat patients with all sizes of aneurysms and other neurovascular lesions
	LIBERTY Stent (investigational device)	Neurovascular stent for stent-assisted coiling in large and wide-neck aneurysms
Neurosurgical Tools (Hemorrhagic Stroke)	Apollo System	Neurosurgical aspiration tools for the removal of tissue and fluids
Peripheral Embolization	Ruby Coil	Large-volume, detachable embolic coil system for peripheral embolization
	LANTERN	Microcatheter for delivery of detachable coils and occlusion devices
	POD (Penumbra Occlusion Device)	Detachable, microcatheter-deliverable occlusion device designed specifically to occlude peripheral vessels
Peripheral Thrombectomy (VTE and PAO)	POD Packing Coil	Complementary device for use with Ruby Coil and POD for vessel occlusion
	Indigo System	Aspiration-based thrombectomy system for peripheral applications

Corporate Information

Edgar Filing: Penumbra Inc - Form 424B5

We were incorporated in 2004 as a Delaware corporation under the name Penumbra, Inc. Our principal executive offices are located at One Penumbra Place, Alameda, California, 94502 and our telephone number is (510) 748-3200. We maintain a website at www.penumbrainc.com. We are not incorporating the contents of the website into, and it is not a part of, this prospectus supplement or the accompanying prospectus.

S-4

Table of Contents

THE OFFERING

Common stock offered by us 1,300,000 shares

Common stock to be outstanding after this offering 33,058,112 shares

Underwriters' option 195,000 shares

Use of proceeds We estimate that the net proceeds to us from this offering will be approximately \$92.3 million, or approximately \$106.2 million if the underwriters exercise their option to purchase additional shares of common stock from us in full, after deducting underwriting discounts and commissions and estimated offering expenses payable by us.

We intend to use the net proceeds from this offering for general corporate purposes, including working capital, continued development of our products, including research and development and clinical trials, potential acquisitions and other business opportunities. Pending the use of the net proceeds from this offering, we intend to invest the net proceeds in investment grade, interest bearing securities. See Use of Proceeds for additional information.

Risk factors Investing in our common stock involves a high degree of risk. See Risk Factors beginning on page S-9 of this prospectus supplement and in the documents incorporated by reference into this prospectus supplement.

NYSE stock symbol PEN

The number of shares of common stock to be outstanding after this offering is based upon 31,758,112 shares outstanding as of December 31, 2016, and excludes:

2,876,955 shares of common stock issuable upon the exercise of options to purchase shares of our common stock outstanding as of December 31, 2016, at a weighted average exercise price of \$14.63 per share;

357,923 shares of common stock issuable upon the settlement of restricted stock units outstanding as of December 31, 2016;

Edgar Filing: Penumbra Inc - Form 424B5

3,683,576 shares of common stock reserved and available for grant under our Amended and Restated 2014 Equity Incentive Plan, as of December 31, 2016, as well as any automatic increases after that date in the number of shares of our common stock reserved for future issuance pursuant to this plan; and

684,953 shares of common stock reserved for issuance under our 2015 Employee Stock Purchase Plan as of December 31, 2016, as well as any automatic increases after that date in the number of shares of our common stock reserved for future issuance pursuant to this plan.

S-5

Table of Contents

Unless otherwise indicated, this prospectus supplement reflects and assumes the following:

outstanding shares include 4,263 shares of common stock issued upon early exercise of stock options and subject to repurchase outstanding as of December 31, 2016;

outstanding shares include 645,021 shares of unvested restricted stock outstanding as of December 31, 2016;

no exercise of options outstanding as of December 31, 2016, or subsequently issued; and

no exercise by the underwriters of their option to purchase up to 195,000 additional shares of our common stock from us.

S-6

Table of Contents**SUMMARY CONSOLIDATED FINANCIAL DATA**

The following tables summarize our consolidated financial data. We have derived the summary consolidated statement of operations data for the years ended December 31, 2014, 2015 and 2016 and our balance sheet data as of December 31, 2016, from our audited consolidated financial statements incorporated by reference into this prospectus supplement from our Annual Report on Form 10-K for the year ended December 31, 2016. Our historical results are not necessarily indicative of the results that may be expected in the future. The following summary consolidated financial data should be read in conjunction with the section titled "Management's Discussion and Analysis of Financial Condition and Results of Operations" and our consolidated financial statements and related notes that are incorporated by reference into this prospectus supplement from our Annual Report on Form 10-K for the year ended December 31, 2016.

	Year Ended December 31,		
	2014	2015	2016
	(in thousands, except per share data)		
Statement of Operations Data:			
Revenue	\$ 125,510	\$ 186,095	\$ 263,317
Cost of revenue	42,668	62,037	92,488
Gross profit	82,842	124,058	170,829
Operating expenses:			
Research and development	15,575	18,027	23,875
Selling, general and administrative	64,258	101,852	148,304
Total operating expenses	79,833	119,879	172,179
Income (Loss) from operations	3,009	4,179	(1,350)
Interest income, net	439	541	2,323
Other expense, net	(309)	(696)	(1,842)
Income (loss) before provision for (benefit from) income taxes	3,139	4,024	(869)
Provision for (benefit from) income taxes	894	1,659	(15,683)
Net income	\$ 2,245	\$ 2,365	\$ 14,814
Net (loss) income attributable to common stockholders	\$ (833)	\$ 1,084	\$ 14,814
Net (loss) income per share attributable to common stockholders			
Basic	\$ (0.18)	\$ 0.09	\$ 0.49
Diluted	\$ (0.18)	\$ 0.08	\$ 0.44

Weighted average common shares outstanding used to
compute net income per share attributable to common
stockholders

Basic	4,609,375	11,993,429	30,464,583
Diluted	4,609,375	14,219,650	33,478,078

S-7

Table of Contents

	As of December 31, 2016	
	Actual	As adjusted ⁽¹⁾
	(in thousands)	
Balance Sheet Data:		
Cash and cash equivalents	\$ 13,236	\$ 105,519
Marketable investments	\$ 115,517	\$ 115,517
Total assets	\$ 308,254	\$ 400,537
Long-term debt	\$	\$
Working capital	\$ 228,027	\$ 320,310
Stockholders' equity	\$ 266,547	\$ 358,830

- (1) The as adjusted column gives effect to the sale and issuance by us of 1,300,000 shares of our common stock in this offering based on the public offering price of \$76.00 per share, and after deducting underwriting discounts and commissions and estimated offering expenses payable by us.

Table of Contents

RISK FACTORS

Investing in our common stock involves a high degree of risk. You should carefully consider the information contained in this prospectus supplement and the accompanying prospectus, as well as the risks described in the section titled "Risk Factors" and elsewhere in our Annual Report on Form 10-K for the year ended December 31, 2016, which is incorporated by reference into this prospectus supplement, before making an investment decision. These risks include, among others:

we have a limited operating history and may not be able to sustain or grow our profitability or generate positive cash flows from operations;

our existing products may be rendered obsolete and we may be unable to effectively introduce and market new products or may fail to keep pace with advances in technology;

delays in product introductions could adversely affect our business, results of operations, financial condition or cash flows;

we face significant competition, and if we are unable to compete effectively, we may not be able to achieve or maintain significant market penetration or improve our results of operations;

our future growth depends, in part, on our ability to further penetrate our current customer base and increase the frequency of use of our products by our customers;

our future growth depends, in part, on significantly expanding our user base to include additional specialist physicians in both our existing and future target end markets;

the marketing and sales of our products require a significant amount of time and expense and we may not have the resources to successfully market and sell our products;

third-party reimbursement may not be available or adequate for the procedures in which our products are used;

we may not be able to achieve or maintain satisfactory pricing and margins for our products;

we cannot be certain that we will be able to manufacture our products in high volumes at commercially reasonable costs;

Edgar Filing: Penumbra Inc - Form 424B5

we are required to maintain high levels of inventory, which consume a significant amount of our working capital and could lead to permanent write-downs or write-offs of our inventory;

defects or failures or alleged defects or failures associated with our products could lead to recalls, safety alerts or litigation, as well as significant costs and negative publicity;

our future success depends in part upon establishing an interventional stroke care pathway in the United States that integrates the use of endovascular thrombectomy into the treatment of ischemic stroke;

we are subject to stringent domestic and foreign medical device regulation, which may impede the approval or clearance process for our products, hinder our development activities and manufacturing processes and, in some cases, result in the recall or seizure of previously approved or cleared products;

we are subject to federal, state and foreign healthcare laws and regulations that could result in significant liability, require us to change our business practices and restrict our operations in the future;

we rely on a variety of intellectual property rights, and if we are unable to maintain or protect our intellectual property, our business and results of operations will be harmed; and

we may become involved in lawsuits or other proceedings to protect or enforce our patents or other intellectual property rights or to defend against accusations of infringement, which could be expensive, time consuming and unsuccessful.

S-9

Table of Contents

Additional risks not presently known to us or that we currently deem immaterial may also impair our business operations. Our business could be harmed by any of these risks. The trading price of our common stock could decline due to any of these risks, and you may lose all or part of your investment.

S-10

Table of Contents

SPECIAL NOTE REGARDING FORWARD-LOOKING STATEMENTS

This prospectus supplement, the accompanying prospectus, and the documents incorporated by reference herein and therein contain forward-looking statements within the meaning of Section 27A of the Securities Act of 1933, as amended (the Securities Act), and Section 21E of the Securities Exchange Act of 1934, as amended (the Exchange Act), that involve a number of risks and uncertainties. In some cases, you can identify these statements by forward-looking words such as may, might, will, should, expects, plans, anticipates, believes, estimates, potential, opportunity or continue, the negative of these terms and other comparable terminology. These forward-looking statements, which are subject to risks, uncertainties and assumptions about us, may include projections of our future financial performance, our anticipated growth strategies and anticipated trends in our business. Forward-looking statements contained or incorporated by reference in this prospectus supplement or the accompanying prospectus include, but are not limited to statements about:

our ability to design, develop, manufacture and market innovative products to treat patients with challenging medical conditions in markets where there is significant clinical need;

our expected future growth, including growth in international sales;

the size and growth potential of the markets for our products, and our ability to address those markets;

the market acceptance of our products;

the performance of our direct salesforce and distributors;

regulatory developments in the United States and other markets in which we sell our products;

our ability to obtain and maintain regulatory approval or clearance of our products on expected timelines;

our ability to scale our organizational culture;

competition;

our use of the proceeds from this offering;

our results of operations and capital requirements; and

our ability to obtain and maintain intellectual property protection for our products, as well as our ability to operate our business without infringing the intellectual property rights of others.

These statements are only predictions based on our current expectations and projections about future events. There are important factors that could cause our actual results, level of activity, performance or achievements to differ materially from the results, level of activity, performance or achievements expressed or implied by the forward-looking statements, including those factors discussed in the sections titled **Risk Factors** in this prospectus supplement, the accompanying prospectus and the documents incorporated by reference herein and therein. Although we believe the expectations reflected in the forward-looking statements are reasonable, we cannot guarantee future results, level of activity, performance or achievements. Moreover, neither we nor any other person assumes responsibility for the accuracy and completeness of any of these forward-looking statements. We undertake no obligation to update any forward-looking statements made in this prospectus supplement or the accompanying prospectus to reflect events or circumstances after the date of this prospectus supplement or the accompanying prospectus, respectively, or to reflect new information or the occurrence of unanticipated events, except as required by law.

S-11

Table of Contents

USE OF PROCEEDS

We estimate that the net proceeds to us from this offering will be approximately \$92.3 million, or approximately \$106.2 million if the underwriters exercise their option to purchase additional shares of common stock from us in full, after deducting underwriting discounts and commissions and estimated offering expenses payable by us, based on the public offering price of \$76.00 per share.

We intend to use the net proceeds from this offering for general corporate purposes, including working capital, continued development of our products, including research and development and clinical trials, potential acquisitions and other business opportunities. Pending the use of the net proceeds from this offering, we intend to invest the net proceeds in investment grade, interest bearing securities.

Our management will have broad discretion in the application of the net proceeds to us from this offering, including for any of the purposes described above.

S-12

Table of Contents**PRICE RANGE OF OUR COMMON STOCK**

Our common stock has been listed on the NYSE under the symbol PEN since September 18, 2015. Prior to that date, there was no established public trading market for our common stock. The following table sets forth, for the periods indicated, the range of high and low sale prices for our common stock as reported on the NYSE. Such quotations represent inter dealer prices without retail markup, markdown, or commission and may not necessarily represent actual transactions.

	High	Low
Year Ended December 31, 2015		
Third Quarter	\$ 43.06	\$ 38.00
Fourth Quarter	59.36	35.31

	High	Low
Year Ended December 31, 2016		
First Quarter	\$ 57.37	\$ 40.23
Second Quarter	61.60	45.00
Third Quarter	79.49	58.46
Fourth Quarter	75.57	56.05

	High	Low
Year Ended December 31, 2017		
First Quarter (through March 16, 2017)	\$ 84.15	\$ 63.05

On March 16, 2017, the last reported sale price of our common stock on the NYSE was \$77.55. As of January 31, 2017, there were 71 holders of record of our common stock. The actual number of stockholders is greater than this number of record holders, and includes stockholders who are beneficial owners, but whose shares are held in street name by brokers and other nominees. This number of holders of record also does not include stockholders whose shares may be held in trust by other entities.

Table of Contents

DIVIDEND POLICY

We have never declared or paid cash dividends on our capital stock. We currently intend to retain all available funds for use in the operation and expansion of our business, and do not anticipate paying any cash dividends in the foreseeable future. Any future determination related to dividend policy will be made at the discretion of our board of directors, subject to applicable laws, and will depend on a number of factors, including our financial condition, results of operations, capital requirements, contractual restrictions, general business conditions and other factors that our board of directors may deem relevant.

S-14

Table of Contents**CAPITALIZATION**

The following table sets forth our cash and cash equivalents and marketable investments and capitalization as of December 31, 2016:

on an actual basis;

on an as adjusted basis, giving effect to the sale and issuance by us of 1,300,000 shares of common stock in this offering, after deducting underwriting discounts and commissions and estimated offering expenses payable by us, based on the public offering price of \$76.00 per share.

You should read this information together with our financial statements and related notes incorporated by reference in this prospectus supplement and the accompanying prospectus. For more details on how you can obtain our SEC reports and other information, you should read the section of the prospectus supplement entitled "Where You Can Find More Information."

(in thousands, except share and per share data)(unaudited)	December 31, 2016	
	Actual	As Adjusted
Cash and cash equivalents and marketable investments	\$ 128,753	\$ 221,036
Long-term debt	\$	\$
Stockholders' equity:		
Preferred stock, \$0.001 par value per share, 5,000,000 shares authorized, no shares issued and outstanding, actual and as adjusted	\$	\$
Common stock, \$0.001 par value per share, 300,000,000 shares authorized, 31,108,828 shares issued and outstanding, actual, 32,408,828 shares issued and outstanding as adjusted	31	32
Additional paid-in capital	273,865	366,147
Accumulated other comprehensive income	(4,688)	(4,688)
Accumulated deficit	(2,661)	(2,661)
Total stockholders' equity	\$ 266,547	\$ 358,830
Total capitalization	\$ 266,547	\$ 358,830

If the underwriters' option to purchase additional shares of our common stock from us was exercised in full, as adjusted cash and cash equivalents and marketable investments, additional paid-in capital, total stockholders' equity and shares outstanding as of December 31, 2016, would be \$235.0 million, \$380.1 million, \$372.8 million and 32,603,828, respectively, after deducting underwriting discounts and commissions and estimated offering expenses payable by us, based on the public offering price of \$76.00 per share.

The as adjusted column in the table above is based on 31,108,828 shares of our common stock outstanding as of December 31, 2016, and excludes the following:

2,876,955 shares of common stock issuable upon the exercise of options to purchase shares of our common stock outstanding as of December 31, 2016, at a weighted average exercise price of \$14.63 per share;

357,923 shares of common stock issuable upon the settlement of restricted stock units outstanding as of December 31, 2016;

4,263 shares of common stock issued upon early exercise of stock options and subject to repurchase outstanding as of December 31, 2016;

S-15

Table of Contents

645,021 shares of unvested restricted stock outstanding as of December 31, 2016;

3,683,576 shares of common stock reserved and available for grant under our Amended and Restated 2014 Equity Incentive Plan, as of December 31, 2016, as well as any automatic increases after that date in the number of shares of our common stock reserved for future issuance pursuant to this plan; and

684,953 shares of common stock reserved for issuance under our 2015 Employee Stock Purchase Plan as of December 31, 2016, as well as any automatic increase after that date in the number of shares of our common stock reserved for future issuance pursuant to this plan.

S-16

Table of Contents

**MATERIAL U.S. FEDERAL INCOME AND ESTATE TAX CONSEQUENCES FOR
NON-U.S. HOLDERS OF COMMON STOCK**

The following are the material U.S. federal income and estate tax consequences of the ownership and disposition of our common stock acquired in this offering by a Non-U.S. Holder that does not own, and has not owned, actually or constructively, more than 5% of our common stock. You are a Non-U.S. Holder if for U.S. federal income tax purposes you are a beneficial owner of our common stock that is:

a nonresident alien individual;

a foreign corporation; or

a foreign estate or trust.

You are not a Non-U.S. Holder if you are a nonresident alien individual present in the United States for 183 days or more in the taxable year of disposition, or if you are a former citizen or former resident of the United States for U.S. federal income tax purposes. If you are such a person, you should consult your tax adviser regarding the U.S. federal income tax consequences of the ownership and disposition of our common stock.

If you are a partnership for U.S. federal income tax purposes, the U.S. federal income tax treatment of a partner will generally depend on the status of the partner and your activities.

This discussion is based on the Internal Revenue Code of 1986, as amended to the date hereof (the Code), administrative pronouncements, judicial decisions and final, temporary and proposed Treasury regulations, changes to any of which subsequent to the date of this prospectus supplement may affect the tax consequences described herein, possibly with retroactive effect. This discussion does not describe all of the tax consequences that may be relevant to you in light of your particular circumstances, including alternative minimum tax and Medicare contribution tax consequences, and does not address any aspect of state, local or non-U.S. taxation, or any taxes other than income and estate taxes. You should consult your tax adviser with regard to the application of the U.S. federal tax laws to your particular situation, as well as any tax consequences arising under the laws of any state, local or non-U.S. taxing jurisdiction.

Dividends

As discussed under Dividend Policy above, we do not currently expect to make distributions on our common stock. In the event that we do make distributions of cash or other property (other than certain pro rata distributions of our stock or rights to acquire our stock), those distributions will constitute dividends for U.S. federal income tax purposes to the extent paid from our current or accumulated earnings and profits, as determined under U.S. federal income tax principles. To the extent those distributions exceed our current and accumulated earnings and profits, they will constitute a return of capital, which will first reduce your basis in our common stock, but not below zero, and then will be treated as gain from the sale of our common stock, as described below under Gain on Disposition of Our Common Stock.

Dividends paid to you generally will be subject to U.S. federal withholding tax at a 30% rate or a reduced rate specified by an applicable income tax treaty. In order to obtain a reduced rate of withholding, you will be required to provide a properly executed applicable Internal Revenue Service (IRS) Form W-8 certifying your entitlement to benefits under a treaty.

If dividends paid to you are effectively connected with your conduct of a trade or business in the United States (and, if required by an applicable income tax treaty, are attributable to a permanent establishment or fixed base maintained by you in the United States), you will generally be taxed on the dividends in the same manner as a U.S. person. In this case, you will be exempt from the withholding tax discussed in the preceding paragraph, although you will be required to provide a properly executed IRS Form W-8ECI in order to claim an exemption

S-17

Table of Contents

from withholding. You should consult your tax adviser with respect to other U.S. tax consequences of the ownership and disposition of our common stock, including the possible imposition of a branch profits tax at a rate of 30% (or a lower treaty rate) if you are a corporation.

Gain on Disposition of Our Common Stock

Subject to the discussions below under **Information Reporting and Backup Withholding** and **FATCA**, you generally will not be subject to U.S. federal income or withholding tax on gain realized on a sale or other taxable disposition of our common stock unless:

the gain is effectively connected with your conduct of a trade or business in the United States (and, if required by an applicable income tax treaty, is attributable to a permanent establishment or fixed base maintained by you in the United States), or

we are or have been a United States real property holding corporation, as defined in the Code, at any time within the five-year period preceding the disposition or your holding period, whichever period is shorter, and our common stock is not regularly traded on an established securities market during the calendar year in which the sale or disposition occurs.

We believe that we are not, and do not anticipate becoming, a United States real property holding corporation.

If you recognize gain on a sale or other disposition of our common stock that is effectively connected with your conduct of a trade or business in the United States (and, if required by an applicable income tax treaty, is attributable to a permanent establishment or fixed base maintained by you in the United States), you will generally be taxed on such gain in the same manner as a U.S. person. You should consult your tax adviser with respect to other U.S. tax consequences of the ownership and disposition of our common stock, including the possible imposition of a branch profits tax at a rate of 30% (or a lower treaty rate) if you are a corporation.

Information Reporting and Backup Withholding

Information returns are required to be filed with the IRS in connection with payments of dividends on our common stock. Unless you comply with certification procedures to establish that you are not a U.S. person, information returns may also be filed with the IRS in connection with the payment of proceeds from a sale or other disposition of our common stock. You may be subject to backup withholding on payments on our common stock or on the proceeds from a sale or other disposition of our common stock unless you comply with certification procedures to establish that you are not a U.S. person or otherwise establish an exemption. Your provision of a properly executed applicable IRS Form W-8 (usually IRS Form W-8BEN or W-8BEN-E) certifying your non-U.S. status will permit you to avoid backup withholding. Amounts withheld under the backup withholding rules are not additional taxes and may be refunded or credited against your U.S. federal income tax liability, provided the required information is timely furnished to the IRS.

FATCA

Provisions of the Code commonly referred to as **FATCA** currently require withholding of 30% on payments of dividends on our common stock, and will require 30% withholding on payments of gross proceeds of dispositions of our common stock occurring after December 31, 2018, to foreign financial institutions (which is broadly defined for

this purpose and in general includes investment vehicles) and certain other non-U.S. entities unless various U.S. information reporting and due diligence requirements (generally relating to ownership by U.S. persons of interests in or accounts with those entities) have been satisfied, or an exemption applies. An intergovernmental agreement between the United States and an applicable foreign country may modify these requirements. If FATCA withholding is imposed, a beneficial owner that is not a foreign financial institution generally may obtain a refund of any amounts withheld by filing a U.S. federal income tax return (which may entail significant administrative burden). You should consult your tax adviser regarding the effects of FATCA on your investment in our common stock.

S-18

Table of Contents

Federal Estate Tax

Individual Non-U.S. Holders and entities the property of which is potentially includible in such an individual's gross estate for U.S. federal estate tax purposes (for example, a trust funded by such an individual and with respect to which the individual has retained certain interests or powers), should note that, absent an applicable treaty exemption, our common stock will be treated as U.S. situs property subject to U.S. federal estate tax.

S-19

Table of Contents**UNDERWRITING**

We are offering the shares of common stock described in this prospectus supplement through a number of underwriters. J.P. Morgan Securities LLC and Merrill Lynch, Pierce, Fenner & Smith Incorporated are acting as joint book-running managers of the offering and as representatives of the underwriters. We have entered into an underwriting agreement with the underwriters. Subject to the terms and conditions of the underwriting agreement, we have agreed to sell to the underwriters, and each underwriter has severally agreed to purchase, at the public offering price less the underwriting discounts and commissions set forth on the cover page of this prospectus supplement, the number of shares of common stock listed next to its name in the following table:

Name	Number of Shares
J.P. Morgan Securities LLC	552,500
Merrill Lynch, Pierce, Fenner & Smith Incorporated	422,500
Wells Fargo Securities, LLC	162,500
Canaccord Genuity Inc.	162,500
Total	1,300,000

The underwriters have committed to purchase all the common shares offered by us if they purchase any shares. The underwriting agreement also provides that if an underwriter defaults, the purchase commitments of non-defaulting underwriters may also be increased or the offering may be terminated.

The underwriters propose to offer the common shares directly to the public at the initial public offering price set forth on the cover page of this prospectus supplement and to certain dealers at that price less a concession not in excess of \$2.736 per share. After the initial offering of the shares to the public, the offering price and other selling terms may be changed by the underwriters. Sales of shares made outside of the United States may be made by affiliates of the underwriters.

The underwriters have an option to buy up to 195,000 additional shares of common stock from us. The underwriters have 30 days from the date of this prospectus supplement to exercise this option to purchase additional shares. If any shares are purchased with this option to purchase additional shares, the underwriters will purchase shares in approximately the same proportion as shown in the table above. If any additional shares of common stock are purchased, the underwriters will offer the additional shares on the same terms as those on which the shares are being offered.

The underwriting fee is equal to the public offering price per share of common stock less the amount paid by the underwriters to us per share of common stock. The underwriting fee is \$4.56 per share. The following table shows the per share and total underwriting discounts and commissions to be paid to the underwriters assuming both no exercise and full exercise of the underwriters' option to purchase additional shares.

Without exercise of option to	With full exercise of option to
--	--

	purchase additional shares	purchase additional shares
Per Share	\$ 4.56	\$ 4.56
Total	\$ 5,928,000	\$ 6,817,200

Perella Weinberg Partners LP (Perella Weinberg), a Financial Industry Regulatory Association, Inc. (FINRA) member, is acting as our financial advisor in connection with the offering.

S-20

Table of Contents

We estimate that the total expenses of this offering, including registration, filing and listing fees, printing fees and legal and accounting expenses, but excluding the underwriting discounts and commissions, will be approximately \$589,000. We have agreed to reimburse the underwriters for certain FINRA-related expenses incurred by them in connection with this offering in an amount up to \$15,000.

A prospectus in electronic format may be made available on the web sites maintained by one or more underwriters, or selling group members, if any, participating in the offering. The underwriters may agree to allocate a number of shares to underwriters and selling group members for sale to their online brokerage account holders. Internet distributions will be allocated by the representatives to underwriters and selling group members that may make Internet distributions on the same basis as other allocations.

We have agreed that, subject to limited exceptions, we will not (i) offer, pledge, sell, contract to sell, sell any option or contract to purchase, purchase any option or contract to sell, grant any option, right or warrant to purchase or otherwise dispose of, directly or indirectly, or file with the Securities and Exchange Commission a registration statement under the Securities Act relating to, any shares of our common stock or securities convertible into or exchangeable or exercisable for any shares of our common stock, or publicly disclose the intention to make any offer, sale, pledge, disposition or filing, or (ii) enter into any swap or other arrangement that transfers all or a portion of the economic consequences associated with the ownership of any shares of common stock or any such other securities (regardless of whether any of these transactions are to be settled by the delivery of shares of common stock or such other securities, in cash or otherwise), in each case without the prior written consent of J.P. Morgan Securities LLC and Merrill Lynch, Pierce, Fenner & Smith Incorporated for a period of 90 days after the date of this prospectus supplement, other than (a) the shares of our common stock to be sold hereunder, (b) any options and other awards granted under our existing equity incentive plans, (c) any shares of our common stock issued upon the exercise of options granted under our existing equity incentive plans and (d) shares of common stock or other securities issued in connection with a transaction with an unaffiliated third party that includes a bona fide commercial relationship (including joint ventures, marketing or distribution arrangements, collaboration agreements or intellectual property license agreements) or any acquisition of assets or equity of another entity (whether by merger, consolidation, acquisition of equity interests or otherwise), provided that (x) the aggregate number of shares issued pursuant to this clause (d) shall not exceed ten percent (10%) of the total number of outstanding shares of our common stock immediately following the issuance and sale of the shares of common stock in this offering and (y) the recipient of any such shares of common stock or securities issued pursuant to this clause (d) during the 90-day restricted period shall enter into a lock-up agreement with the underwriters.

Our directors and executive officers have entered into lock-up agreements with the underwriters prior to the commencement of this offering pursuant to which each of these persons or entities, with limited exceptions, for a period of 90 days after the date of this prospectus supplement, may not, without the prior written consent of J.P. Morgan Securities LLC and Merrill Lynch, Pierce, Fenner & Smith Incorporated, (1) offer, pledge, sell, contract to sell, sell any option or contract to purchase, purchase any option or contract to sell, grant any option, right or warrant to purchase, or otherwise transfer or dispose of, directly or indirectly, any shares of our common stock or any securities convertible into or exercisable or exchangeable for our common stock (including, without limitation, common stock or such other securities which may be deemed to be beneficially owned by such directors or executive officers in accordance with the rules and regulations of the SEC and securities which may be issued upon exercise of a stock option or warrant) or (2) enter into any swap or other agreement that transfers, in whole or in part, any of the economic consequences of ownership of the common stock or such other securities, whether any such transaction described in clause (1) or (2) above is to be settled by delivery of common stock or such other securities, in cash or otherwise, or (3) make any demand for or exercise any right with respect to the registration of any shares of our common stock or any security convertible into or exercisable or exchangeable for our common stock. The restrictions described above are subject to exceptions, including:

transactions relating to shares acquired in open market transactions after the completion of this offering, provided that no filing under Section 16(a) of the Exchange Act, or other public

S-21

Table of Contents

announcement, shall be required or shall be made voluntarily in connection with any such transaction (other than a filing on a Form 5 made after the expiration of the restricted period);

transfers that occur by operation of law pursuant to a qualified domestic order or in connection with a divorce settlement, provided that any filing required to be made under Section 16(a) of the Exchange Act shall clearly indicate the purpose of the transfer in the footnotes thereto, no other public announcement shall be required or shall be made voluntarily in connection with such transfer and each transferee, donee or distributee shall execute and deliver to the underwriters a lock-up agreement substantially in the form of the lock-up agreement entered into by the party subject to the lockup restrictions;

transfers to us pursuant to agreements under which we have the option to repurchase such shares or securities upon termination of service of the party subject to the lockup restrictions, provided that any public report or filing required to be made under Section 16(a) of the Exchange Act shall clearly indicate in the footnotes thereto the circumstances of such transfer and no other public announcement shall be required or shall be made voluntarily in connection with such transfer;

the exercise of stock options granted under a stock incentive plan or stock purchase plan described in this prospectus supplement, provided that the shares received upon exercise shall continue to be subject to the restrictions on transfer set forth in the lock-up agreement and that any public report or filing required to be made under Section 16(a) of the Exchange Act shall clearly indicate in the footnotes thereto that the filing relates to the exercise of a stock option, that no shares were sold by the reporting person and that the shares received upon exercise of the stock option are subject to a lock-up agreement with the underwriters;

transfers to us upon the exercise of options to purchase our securities outstanding as of the date the party subject to the lockup restrictions entered into the lock-up agreement or pursuant to a stock incentive plan or stock purchase plan described in this prospectus supplement, on a cashless or net exercise basis, provided that the shares received upon exercise shall continue to be subject to the restrictions on transfer set forth in the lock-up agreement and that any public report or filing required to be made under Section 16(a) of the Exchange Act shall clearly indicate in the footnotes thereto that the filing relates to the cashless or net exercise of a stock option, that no shares were sold by the reporting person and that the shares received upon exercise of the stock option are subject to a lock-up letter agreement with the underwriters;

the establishment of a trading plan pursuant to Rule 10b5-1 under the Exchange Act for the transfer of shares of common stock (a Trading Plan), provided that (i) such plan does not provide for the transfer of common stock during the restricted period and (ii) no public announcement or filing shall be required or shall be made voluntarily in connection with the establishment of such plan during the restricted period; or

the transfer of any shares pursuant to a Trading Plan established prior to the date the party subject to the lockup restrictions entered into the lock-up agreement (an Existing Plan), provided that if the such party reports any such sale or transfer on a Form 4 under Section 16(a) of the Exchange Act, such Form 4 shall include a statement that such transfer was effected pursuant to an Existing Plan that was in effect on the date that such party entered into the lock-up agreement; and provided further that such party shall not, without the

prior written consent of the representatives of the underwriters, amend any Existing Plan to permit any sales or transfers of additional shares during the restricted period unless such transfer is otherwise permitted under the terms of the lock-up agreement.

We have agreed to indemnify the underwriters against certain liabilities, including liabilities under the Securities Act.

Our common stock is listed on the NYSE under the symbol PEN .

S-22

Table of Contents

In connection with this offering, the underwriters may engage in stabilizing transactions, which involves making bids for, purchasing and selling shares of common stock in the open market for the purpose of preventing or retarding a decline in the market price of the common stock while this offering is in progress. These stabilizing transactions may include making short sales of the common stock, which involves the sale by the underwriters of a greater number of shares of common stock than they are required to purchase in this offering, and purchasing shares of common stock on the open market to cover positions created by short sales. Short sales may be covered shorts, which are short positions in an amount not greater than the underwriters' option to purchase additional shares referred to above, or may be naked shorts, which are short positions in excess of that amount. The underwriters may close out any covered short position either by exercising their option to purchase additional shares, in whole or in part, or by purchasing shares in the open market. In making this determination, the underwriters will consider, among other things, the price of shares available for purchase in the open market compared to the price at which the underwriters may purchase shares through the option to purchase additional shares. A naked short position is more likely to be created if the underwriters are concerned that there may be downward pressure on the price of the common stock in the open market that could adversely affect investors who purchase in this offering. To the extent that the underwriters create a naked short position, they will purchase shares in the open market to cover the position.

The underwriters have advised us that, pursuant to Regulation M of the Securities Act, they may also engage in other activities that stabilize, maintain or otherwise affect the price of the common stock, including the imposition of penalty bids. This means that if the representatives of the underwriters purchase common stock in the open market in stabilizing transactions or to cover short sales, the representatives can require the underwriters that sold those shares as part of this offering to repay the underwriting discount received by them.

These activities may have the effect of raising or maintaining the market price of the common stock or preventing or retarding a decline in the market price of the common stock, and, as a result, the price of the common stock may be higher than the price that otherwise might exist in the open market. If the underwriters commence these activities, they may discontinue them at any time. The underwriters may carry out these transactions on the NYSE, in the over-the-counter market or otherwise.

Certain of the underwriters or their affiliates have provided us in the past, and currently provide us, with commercial banking services, for which they have received customary compensation. Certain of the underwriters or their affiliates may provide from time to time in the future certain commercial banking, financial advisory, investment banking and other services for us or our affiliates in the ordinary course of their business, for which they may receive customary fees and commissions. In addition, from time to time in the future, certain of the underwriters or their affiliates may effect transactions for their own account or the account of customers, and hold on behalf of themselves or their customers, long or short positions in our debt or equity securities or loans.

Selling Restrictions

General

Other than in the United States, no action has been taken by us or the underwriters that would permit a public offering of the securities offered by this prospectus supplement in any jurisdiction where action for that purpose is required. The securities offered by this prospectus supplement may not be offered or sold, directly or indirectly, nor may this prospectus supplement or any other offering material or advertisements in connection with the offer and sale of any such securities be distributed or published in any jurisdiction, except under circumstances that will result in compliance with the applicable rules and regulations of that jurisdiction. Persons into whose possession this prospectus supplement comes are advised to inform themselves about and to observe any restrictions relating to the offering and the distribution of this prospectus supplement. This prospectus supplement does not constitute an offer to

sell or a solicitation of an offer to buy any securities offered by this prospectus supplement in any jurisdiction in which such an offer or a solicitation is unlawful.

S-23

Table of Contents

Notice to Prospective Investors in the European Economic Area

In relation to each Member State of the European Economic Area which has implemented the Prospectus Directive (each, a Relevant Member State), with effect from and including the date on which the Prospectus Directive is implemented in that Relevant Member State, no offer of shares may be made to the public in that Relevant Member State other than:

- A. to any legal entity which is a qualified investor as defined in the Prospectus Directive;
- B. to fewer than 150 natural or legal persons (other than qualified investors as defined in the Prospectus Directive), subject to obtaining the prior consent of the underwriters; or
- C. in any other circumstances falling within Article 3(2) of the Prospectus Directive, provided that no such offer of shares shall require the Company or any underwriter to publish a prospectus pursuant to Article 3 of the Prospectus Directive or supplement a prospectus pursuant to Article 16 of the Prospectus Directive and each person who initially acquires any shares or to whom any offer is made will be deemed to have represented, acknowledged and agreed to and with each of the underwriters and the Company that it is a qualified investor within the meaning of the law in that Relevant Member State implementing Article 2(1)(e) of the Prospectus Directive.

In the case of any shares being offered to a financial intermediary as that term is used in Article 3(2) of the Prospectus Directive, each such financial intermediary will be deemed to have represented, acknowledged and agreed that the shares acquired by it in the offer have not been acquired on a non-discretionary basis on behalf of, nor have they been acquired with a view to their offer or resale to, persons in circumstances which may give rise to an offer of any shares to the public other than their offer or resale in a Relevant Member State to qualified investors as so defined or in circumstances in which the prior consent of the representatives has been obtained to each such proposed offer or resale.

For the purposes of this provision, the expression an offer of shares to the public in relation to any shares in any Relevant Member State means the communication in any form and by means of sufficient information on the terms of the offer and the shares to be offered so as to enable an investor to decide to purchase shares, as the same may be varied in that Member State by any measure implementing the Prospectus Directive in that Member State, the expression Prospectus Directive means Directive 2003/71/EC (as amended, including by Directive 2010/73/EU), and includes any relevant implementing measure in the Relevant Member State.

Notice to Prospective Investors in the United Kingdom

In addition, in the United Kingdom, this document is being distributed only to, and is directed only at, and any offer subsequently made may only be directed at persons who are qualified investors (as defined in the Prospectus Directive) (i) who have professional experience in matters relating to investments falling within Article 19(5) of the Financial Services and Markets Act 2000 (Financial Promotion) Order 2005, as amended (the Order) and/or (ii) who are high net worth companies (or persons to whom it may otherwise be lawfully communicated) falling within Article 49(2)(a) to (d) of the Order (all such persons together being referred to as relevant persons) or otherwise in circumstances which have not resulted and will not result in an offer to the public of the shares in the United Kingdom within the meaning of the Financial Services and Markets Act 2000.

Any person in the United Kingdom that is not a relevant person should not act or rely on the information included in this document or use it as basis for taking any action. In the United Kingdom, any investment or investment activity that this document relates to may be made or taken exclusively by relevant persons.

Notice to Prospective Investors in Canada

The shares may be sold only to purchasers purchasing, or deemed to be purchasing, as principal that are accredited investors, as defined in National Instrument 45-106 *Prospectus Exemptions* or subsection 73.3(1) of

S-24

Table of Contents

the *Securities Act* (Ontario), and are permitted clients, as defined in National Instrument 31-103 *Registration Requirements, Exemptions and Ongoing Registrant Obligations*. Any resale of the shares must be made in accordance with an exemption from, or in a transaction not subject to, the prospectus requirements of applicable securities laws.

Securities legislation in certain provinces or territories of Canada may provide a purchaser with remedies for rescission or damages if this prospectus supplement (including any amendment thereto) contains a misrepresentation, provided that the remedies for rescission or damages are exercised by the purchaser within the time limit prescribed by the securities legislation of the purchaser's province or territory. The purchaser should refer to any applicable provisions of the securities legislation of the purchaser's province or territory for particulars of these rights or consult with a legal advisor.

Pursuant to section 3A.3 (or, in the case of securities issued or guaranteed by the government of a non-Canadian jurisdiction, section 3A.4) of National Instrument 33-105 *Underwriting Conflicts* (NI 33-105), the underwriters are not required to comply with the disclosure requirements of NI 33-105 regarding underwriter conflicts of interest in connection with this offering.

S-25

Table of Contents

LEGAL MATTERS

The validity of the issuance of the shares of common stock offered hereby will be passed upon for us by Davis Polk & Wardwell LLP, Menlo Park, California. Goodwin Procter LLP is representing the underwriters.

EXPERTS

The consolidated financial statements, incorporated in this prospectus supplement by reference from the Company's Annual Report on Form 10-K for the year ended December 31, 2016, and the effectiveness of internal control over financial reporting have been audited by Deloitte & Touche LLP, an independent registered public accounting firm, as stated in their reports, which are incorporated herein by reference (which reports (1) express an unqualified opinion on the financial statements and includes an explanatory paragraph referring to the early adoption of Financial Accounting Standards Board Accounting Standards Update 2016-09, *Compensation Stock Compensation: Improvements to Employee Share-Based Payment Accounting*, and (2) express an unqualified opinion on the effectiveness of internal control over financial reporting). Such consolidated financial statements have been so incorporated in reliance upon the reports of such firm given upon their authority as experts in accounting and auditing.

WHERE YOU CAN FIND MORE INFORMATION

We file annual, quarterly and current reports, proxy statements and other information with the SEC. You may read and copy any document that we file at the Public Reference Room of the SEC at 100 F Street, N.E., Washington, D.C. 20549. You may obtain information on the operation of the Public Reference Room by calling the SEC at 1-800-SEC-0330. In addition, the SEC maintains an Internet site at <http://www.sec.gov>, from which interested persons can electronically access our SEC filings, including the registration statement and the exhibits and schedules thereto.

The SEC allows us to incorporate by reference the information we file with them, which means that we can disclose important information to you by referring you to those documents. The information incorporated by reference is an important part of this prospectus supplement, and information that we file later with the SEC will automatically update and supersede this information. We incorporate by reference the document listed below and all documents we file pursuant to Section 13(a), 13(c), 14, or 15(d) of the Exchange Act on or after the date of this prospectus supplement and prior to the termination of the offering under this prospectus supplement (other than, in each case, documents or information deemed to have been furnished and not filed in accordance with SEC rules):

our Annual Report on Form 10-K for the year ended December 31, 2016.

You may request a copy of these filings at no cost, by writing or telephoning the office of Investor Relations, Penumbra, Inc., One Penumbra Place, Alameda, California, (510) 748-3200. Information about us, including copies of our Annual Reports on Form 10-K, Quarterly Reports on Form 10-Q and Current Reports on Form 8-K filed with the SEC, is also available at our website at www.penumbrainc.com. However, the information on our website is not a part of, or incorporated by reference in, this prospectus supplement or any additional prospectus supplement that we file and should not be relied upon in determining whether to make an investment in our securities.

Table of Contents

PROSPECTUS

DEBT SECURITIES

COMMON STOCK

PREFERRED STOCK

DEPOSITARY SHARES

WARRANTS

PURCHASE CONTRACTS UNITS

We may offer from time to time debt securities, common stock, preferred stock, depositary shares, warrants, purchase contracts or units. In addition, certain selling securityholders to be identified in a prospectus supplement may use this prospectus from time to time to offer shares of common stock. Specific terms of these securities will be provided in supplements to this prospectus. You should read this prospectus and any supplement carefully before you invest.

Investing in these securities involves certain risks. See Risk Factors beginning on page 17 of our Annual Report on Form 10-K for the year ended December 31, 2016 which is incorporated by reference herein.

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

The date of this prospectus is March 14, 2017

Table of Contents

We and/or any selling securityholders to be identified in a prospectus supplement to this prospectus have not authorized anyone to provide any information other than that contained or incorporated by reference in this prospectus or in any free writing prospectus prepared by or on behalf of us or to which we have referred you. We and/or any selling securityholders to be identified in a prospectus supplement to this prospectus take no responsibility for, and can provide no assurance as to the reliability of, any other information that others may give you. We and/or any selling securityholders to be identified in a prospectus supplement to this prospectus are not making an offer of these securities in any state where the offer is not permitted. You should not assume that the information contained in or incorporated by reference in this prospectus or any prospectus supplement or in any such free writing prospectus is accurate as of any date other than their respective dates.

The terms Penumbra, Penumbra, Inc., the Company, we, us and our refer to Penumbra, Inc. and its consolidated subsidiaries, unless the context specifically states otherwise.

TABLE OF CONTENTS

	Page
<u>The Company</u>	1
<u>Where You Can Find More Information</u>	2
<u>Special Note On Forward-Looking Statements</u>	3
<u>Use of Proceeds</u>	4
<u>Ratio of Earnings to Fixed Charges</u>	4
<u>Description of Capital Stock</u>	5
<u>Description of Depositary Shares Representing Preferred Stock</u>	11
<u>Description of Debt Securities</u>	11
<u>Description of Warrants</u>	20
<u>Description of Purchase Contracts</u>	21
<u>Description of Units</u>	21
<u>Forms of Securities</u>	22
<u>Selling Securityholders</u>	24
<u>Validity of Securities</u>	24
<u>Experts</u>	24

Table of Contents

THE COMPANY

Penumbra is a global healthcare company focused on interventional therapies. We design, develop, manufacture and market innovative devices and have a broad portfolio of products that addresses challenging medical conditions and significant clinical needs across two major markets, neuro and peripheral vascular. The conditions that our products address include, among others, ischemic stroke, hemorrhagic stroke and various peripheral vascular conditions that can be treated through thrombectomy and embolization procedures.

Our team focuses on developing, manufacturing and marketing products for use by specialist physicians, including interventional neuroradiologists, neurosurgeons, interventional neurologists, interventional radiologists and vascular surgeons. We design our products to provide these specialist physicians with a means to drive improved clinical outcomes.

Since our founding in 2004, we have had a strong track record of organic product development and commercial expansion that has established the foundation of our global organization. Some of our selected accomplishments include:

launching our first product, for neurovascular access, in the United States in 2007;

establishing our direct neuro salesforce in the United States and Europe in 2008;

launching the first U.S. Food and Drug Administration (FDA)-cleared, aspiration catheter for the treatment of ischemic stroke patients in 2008, and launching five subsequent generations of that product;

launching our first neurovascular coil for the treatment of brain aneurysms in 2011;

launching our first peripheral vascular product in 2013;

establishing our direct peripheral vascular salesforce in the United States and Europe in 2014; and

launching our first peripheral thrombectomy products for the treatment of venous disease in 2015.

We attribute our success to our culture built on cooperation, our highly efficient product innovation process, our disciplined approach to product and commercial development, our deep understanding of our target end markets and our relationships with specialist physicians. We believe these factors have enabled us to rapidly innovate in a highly capital-efficient manner.

We sell our products to hospitals primarily through our direct sales organization in the United States, most of Europe, Canada and Australia, as well as through distributors in select international markets.

We were incorporated in 2004 as a Delaware corporation under the name Penumbra, Inc. Our principal executive offices are located at One Penumbra Place, Alameda, California, 94502 and our telephone number is (510) 748-3200. We maintain a website at www.penumbrainc.com. We are not incorporating the contents of the website into, and it is not a part of, this prospectus.

About this Prospectus

This prospectus is part of a registration statement that we filed with the SEC utilizing a shelf registration process. Under this shelf process, we may sell any combination of the securities described in this prospectus in one or more offerings. This prospectus provides you with a general description of the securities we may offer. Each time we sell securities, we will provide a prospectus supplement that will contain specific information about the terms of that offering. The prospectus supplement may also add, update or change information contained in this prospectus. You should read both this prospectus and any prospectus supplement together with additional information described under the heading **Where You Can Find More Information**.

Table of Contents

WHERE YOU CAN FIND MORE INFORMATION

We file annual, quarterly and current reports, proxy statements and other information with the SEC. You may read and copy any document that we file at the Public Reference Room of the SEC at 100 F Street, N.E., Washington, D.C. 20549. You may obtain information on the operation of the Public Reference Room by calling the SEC at 1-800-SEC-0330. In addition, the SEC maintains an Internet site at <http://www.sec.gov>, from which interested persons can electronically access our SEC filings, including the registration statement and the exhibits and schedules thereto.

The SEC allows us to incorporate by reference the information we file with them, which means that we can disclose important information to you by referring you to those documents. The information incorporated by reference is an important part of this prospectus, and information that we file later with the SEC will automatically update and supersede this information. We incorporate by reference the documents listed below and all documents we file pursuant to Section 13(a), 13(c), 14, or 15(d) of the Securities Exchange Act of 1934, as amended (the Exchange Act) on or after the date of this prospectus and prior to the termination of the offering under this prospectus and any prospectus supplement (other than, in each case, documents or information deemed to have been furnished and not filed in accordance with SEC rules):

(a) our Annual Report on Form 10-K for the year ended December 31, 2016.

You may request a copy of these filings at no cost, by writing or telephoning the office of Investor Relations, Penumbra, Inc., One Penumbra Place, Alameda, California, 94502, (510) 748-3200. Information about us, including copies of our Annual Reports on Form 10-K, Quarterly Reports on Form 10-Q and Current Reports on Form 8-K filed with the SEC, is also available at our website at www.penumbrainc.com. However, the information on our website is not a part of, or incorporated by reference in, this prospectus or any prospectus supplement that we file and should not be relied upon in determining whether to make an investment in our securities.

Table of Contents

SPECIAL NOTE ON FORWARD-LOOKING STATEMENTS

This prospectus, including the documents incorporated by reference herein, contains forward-looking statements. In some cases, you can identify these statements by forward-looking words such as may, might, will, should, expect, plans, anticipates, believes, estimates, predicts, potential or continue, the negative of these terms and other terminology. These forward-looking statements, which are subject to risks, uncertainties and assumptions about us, may include projections of our future financial performance, our anticipated growth strategies and anticipated trends in our business. These statements are only predictions based on our current expectations and projections about future events. There are important factors that could cause our actual results, level of activity, performance or achievements to differ materially from the results, level of activity, performance or achievements expressed or implied by the forward-looking statements, including those factors discussed under the caption entitled Risk Factors in our Annual Report on Form 10-K for the year ended December 31, 2016.

Although we believe the expectations reflected in the forward-looking statements are reasonable, we cannot guarantee future results, level of activity, performance or achievements. Moreover, neither we nor any other person assumes responsibility for the accuracy and completeness of any of these forward-looking statements. We are under no duty to update any of these forward-looking statements after the date of this prospectus to conform our prior statements to actual results or revised expectations.

Table of Contents**USE OF PROCEEDS**

Unless otherwise indicated in a prospectus supplement, the net proceeds from the sale of the securities will be used for general corporate purposes, including working capital, continued development of our products, including research and development and clinical trials, potential acquisitions, and other business opportunities. We will not receive any proceeds from sales of securities offered by any selling securityholders under this prospectus.

RATIO OF EARNINGS TO FIXED CHARGES

The following table sets forth our ratio of earnings to fixed charges for the periods indicated. Ratio of earnings to fixed charges means the ratio of (loss) income before provision for (benefit from) income taxes plus fixed charges to fixed charges, where fixed charges consist of the interest on indebtedness, amortization of debt expense and estimated interest factor for rentals. For the periods indicated below, we had no outstanding shares of preferred stock with required dividend payments. Accordingly, the ratio of earnings to combined fixed charges and preference dividends is identical to the ratio of earnings to fixed charges for each period shown below. The following should be read in conjunction with our financial statements, including the notes thereto, and the other financial information included or incorporated by reference herein. See Exhibit 12.1 hereto for additional detail regarding the computation of earnings to cover fixed charges.

	For the Year Ended December 31,				
	2016	2015	2014	2013	2012
Ratio of earnings to fixed charges	(a)	4.83	6.27	(a)	2.54

- (a) Earnings for the year ended December 31, 2016 and 2013 were inadequate to cover fixed charges by approximately \$0.9 million and approximately \$1.3 million, respectively.

Table of Contents

DESCRIPTION OF CAPITAL STOCK

The following description of our capital stock is based upon our restated certificate of incorporation (Certificate of Incorporation), our amended and restated bylaws (Bylaws) and applicable provisions of law. We have summarized certain portions of our Certificate of Incorporation and Bylaws below. The summary is not complete. Our Certificate of Incorporation and Bylaws are incorporated by reference as exhibits to the registration statement of which this prospectus forms a part. You should read our Certificate of Incorporation and Bylaws for the provisions that are important to you.

General

Our authorized capital stock consists of 300,000,000 shares of common stock, par value \$0.001 per share, and 5,000,000 shares of undesignated preferred stock, par value \$0.001 per share. As of January 31, 2017, there were 31,941,821 shares of common stock outstanding which were held of record by 71 stockholders and no shares of preferred stock outstanding. All outstanding shares of common stock are fully paid and non-assessable, and all of the shares of common stock or preferred stock that may be offered with this prospectus will be fully paid and non-assessable.

Common Stock

Voting rights. The holders of common stock are entitled to one vote per share on all matters to be voted upon by the stockholders.

Dividend rights. Subject to preferences that may be applicable to any outstanding preferred stock, the holders of common stock are entitled to receive ratably such dividends, if any, as may be declared from time to time by the board of directors out of funds legally available therefor.

Rights upon liquidation. In the event of liquidation, dissolution or winding-up of Penumbra, the holders of common stock are entitled to share ratably in all assets remaining after payment of liabilities, subject to prior distribution rights of preferred stock, if any, then outstanding.

Other rights. The holders of our common stock have no preemptive or conversion rights or other subscription rights. There are no redemption or sinking fund provisions applicable to the common stock.

Listing. Our common stock is listed on the New York Stock Exchange under the symbol PEN.

Transfer Agent. The transfer agent and registrar for our common stock is American Stock Transfer & Trust Company, LLC.

Registration Rights. Subject to earlier termination, certain of our affiliates are entitled to rights with respect to the registration of certain of their shares under the Securities Act of 1933, as amended (the Securities Act). These registration rights are contained in our Fourth Amended and Restated Investors Rights Agreement, dated as of May 16, 2014, and are described in additional detail below. With respect to any particular stockholder, when such stockholder is able to sell all of its shares pursuant to Rule 144 of the Securities Act, without restriction (including any volume limitations), these registration rights will expire. We will pay the registration expenses (other than underwriting discounts and selling commissions) of the holders of the shares registered pursuant to the registrations describe below. In an underwritten offering, the managing underwriter, if any, has the right, subject to specified conditions, to limit the number of shares such holders may include.

Demand Registration Rights. Until September 23, 2018, certain of our affiliates will be entitled to demand registration rights with respect to certain of their shares. The holders of at least 66 2/3% of these securities have

Table of Contents

the right to require us, on not more than two occasions, to file a registration statement under the Securities Act in order to register the resale of their shares of common stock. We may, in certain circumstances, defer such registrations and the underwriters have the right, subject to certain limitations, to limit the number of shares included in such registrations.

Piggyback Registration Rights. If we propose to register the offer and sale of any of our securities under the Securities Act, in connection with the public offering of such securities certain of our affiliates will be entitled to piggyback registration rights allowing the holders to include certain of their shares in such registration, subject to certain marketing and other limitations. As a result, whenever we propose to file a registration statement under the Securities Act, other than with respect to a registration related to a company stock plan or on any form which does not include substantially the same information as would be required to be included in a registration statement covering the sale of the registrable securities or a registration that would not customarily provide for the sale of secondary equity shares for cash, the holders of these shares are entitled to notice of the registration and have the right, subject to limitations that the underwriters may impose on the number of shares included in the registration, to include their shares in the registration.

S-3 Registration Rights. Certain of our affiliates may make a written request that we register the offer and sale of certain of their shares on Form S-3 if we are eligible to file a registration statement on Form S-3 so long as the request covers at least that number of shares with an anticipated aggregate offering price of at least \$1.0 million. These stockholders may make an unlimited number of requests for registration on Form S-3; however, we will not be required to effect a registration on Form S-3 if we have effected two such registrations in a given 12-month period. Additionally, if we determine that it would be seriously detrimental to us and our stockholders to effect such a registration, we have the right to defer such registration, not more than once in any 12-month period, for a period of up to 180 days.

Preferred Stock

Our board of directors has the authority to issue up to 5,000,000 shares of preferred stock in one or more series and to fix the rights, preferences, privileges and restrictions thereof, including dividend rights, dividend rates, conversion rights, voting rights, terms of redemption, redemption prices, liquidation preferences and the number of shares constituting any series or the designation of such series, without further vote or action by the stockholders.

The existence of authorized but unissued and unreserved shares of capital stock may make it more difficult for or discourage an attempt by a potential acquirer to obtain control of our company by means of a merger, tender offer, proxy contest or otherwise, and the issuance of preferred stock may have the effect of delaying, deferring or preventing a change in control of Penumbra without further action by the stockholders. The issuance of preferred stock may adversely affect the voting and other rights of the holders of common stock.

When we offer to sell a particular series of preferred stock, including preferred stock to be represented by depositary shares, we will describe the specific terms of the securities in a supplement to this prospectus. The preferred stock will be issued under a certificate of designations relating to each series of preferred stock and is also subject to our Certificate of Incorporation.

The transfer agent for each series of preferred stock and any exchange on which we plan to list a series of preferred stock will be described in the prospectus supplement.

Election and Removal of Directors

Our Bylaws provide that our board of directors will consist of between five and nine directors. The exact number of directors will be fixed from time to time by resolution of the board, and is currently set at six, with one vacancy. No director may be removed except for cause, and directors may be removed for cause by an

Table of Contents

affirmative vote of shares representing a majority of the shares then entitled to vote at an election of directors. Any vacancy occurring on the board of directors and any newly created directorship may be filled only by a majority of the remaining directors in office.

Staggered Board

Our board of directors is divided into three classes serving staggered three-year terms. At each annual meeting of stockholders, directors will be elected to succeed the class of directors whose terms have expired. This classification of our board of directors could have the effect of increasing the length of time necessary to change the composition of a majority of the board of directors. In general, at least two annual meetings of stockholders will be necessary for stockholders to effect a change in a majority of the members of the board of directors.

Limits on Written Consents

Our Certificate of Incorporation and Bylaws provide that holders of our common stock are not able to act by written consent without a meeting.

Stockholder Meetings

Our Certificate of Incorporation and Bylaws provide that special meetings of our stockholders may be called only by our board of directors acting pursuant to a resolution adopted by a majority of the board of directors.

Amendment of Certificate of Incorporation

The provisions of our Certificate of Incorporation described under the sections titled Common Stock Voting rights, Amendment of Bylaws, Election and Removal of Directors, Stockholder Meetings and Limits on Written Consents may be amended only by the affirmative vote of holders of at least $66\frac{2}{3}\%$ of the voting power of our outstanding shares of voting stock, voting together as a single class. The affirmative vote of holders of at least a majority of the voting power of our outstanding shares of stock is generally required to amend other provisions of our Certificate of Incorporation.

Amendment of Bylaws

Our Bylaws may generally be altered, amended or repealed, and new bylaws may be adopted, with:

the affirmative vote of a majority of directors present at any regular or special meeting of the board of directors called for that purpose, or without a meeting if all members of the board of directors consent to the taking of the action; or

the affirmative vote of holders of $66\frac{2}{3}\%$ of the voting power of our outstanding shares of voting stock, voting together as a single class.

Other Limitations on Stockholder Actions

Our Bylaws also impose procedural requirements on stockholders who wish to:

make nominations in the election of directors;

propose any amendment to the Bylaws; or

propose any other business to be brought before an annual or special meeting of stockholders.

Table of Contents

In order to bring a proposal before a meeting of stockholders, a stockholder must deliver timely notice of a proposal pertaining to a proper subject for presentation at the meeting to our corporate secretary along with the following:

a brief description of any business to be brought before the meeting and the reasons for conducting such business at the meeting;

the text of any proposed amendments to the Bylaws;

the stockholder's name and address;

the number and type of shares beneficially owned by the stockholder and evidence of such ownership;

a description of any arrangement between the stockholder and other beneficial owners of our stock;

any hedging arrangements with respect to our securities entered into by the stockholder;

representations as to whether the stockholder intends to appear at the meeting, distribute a proxy statement or otherwise solicit proxies; and

any other information required to be disclosed under the Exchange Act or that we may reasonably require to determine that the proposed business is proper.

In order to submit a nomination for our board of directors, a stockholder must also timely submit any information with respect to the nominee that we would be required to include in a proxy statement, as well as certain additional information. If a stockholder fails to follow the required procedures, the stockholder's proposal or nominee will be ineligible and will not be voted on by our stockholders.

To be timely, a stockholder must generally deliver notice:

in connection with an annual meeting of stockholders, not less than 120 nor more than 150 days prior to the date on which the annual meeting of stockholders was held in the immediately preceding year, but in the event that the date of the annual meeting is more than 30 days before or more than 70 days after the anniversary date of the preceding annual meeting of stockholders, a stockholder notice will be timely if received by us not later than the close of business on the later of (1) the 70th day prior to the annual meeting and (2) the 10th day following the day on which we first publicly announce the date of the annual meeting; or

in connection with the election of a director at a special meeting of stockholders, not earlier than 150 nor later than the later of (1) 120 days prior to the date of the special meeting and (2) the close of business on the 10th day following the day on which a notice of the date of the special meeting was mailed to the stockholders or the public disclosure of that date was made.

Limitation of Liability of Directors and Officers

Our Certificate of Incorporation provides that no director will be personally liable to us or our stockholders for monetary damages for breach of fiduciary duty as a director, except as required by applicable law, as in effect from time to time. Currently, Delaware law requires that liability be imposed for the following:

any breach of the director's duty of loyalty to our company or our stockholders;

any act or omission not in good faith or which involved intentional misconduct or a knowing violation of law;

unlawful payments of dividends or unlawful stock repurchases or redemptions as provided in Section 174 of the General Corporation Law of the State of Delaware (the "Delaware General Corporation Law"); and

any transaction from which the director derived an improper personal benefit.

Table of Contents

As a result, neither we nor our stockholders have the right, through stockholders' derivative suits on our behalf, to recover monetary damages against a director for breach of fiduciary duty as a director, including breaches resulting from grossly negligent behavior, except in the situations described above.

Our Bylaws provide that, to the fullest extent permitted by law, we will indemnify any officer or director of our company against all damages, claims and liabilities arising out of the fact that the person is or was our director or officer, or served any other enterprise at our request as a director, officer, employee, agent or fiduciary. We will reimburse the expenses, including attorneys' fees, incurred by a person indemnified by this provision when we receive an undertaking to repay such amounts if it is ultimately determined that the person is not entitled to be indemnified by us. Amending this provision will not reduce our indemnification obligations relating to actions taken before an amendment.

Forum Selection

The Court of Chancery of the State of Delaware will be the sole and exclusive forum for (i) any derivative action or proceeding brought on behalf of Penumbra, (ii) any action asserting a claim of breach of fiduciary duty owed by any director, officer or other employee of Penumbra to Penumbra or Penumbra's stockholders, (iii) any action asserting a claim arising pursuant to any provision of the Delaware General Corporation Law, or (iv) any action asserting a claim governed by the internal affairs doctrine. Any person or entity purchasing or otherwise acquiring any interest in shares of capital stock of Penumbra will be deemed to have notice of and consented to the foregoing forum selection provisions.

Delaware Business Combination Statute

We have elected in our Certificate of Incorporation to be subject to Section 203 of the Delaware General Corporation Law, which regulates corporate acquisitions. Section 203 prevents an interested stockholder, which is defined generally as a person owning 15% or more of a corporation's voting stock, or any affiliate or associate of that person, from engaging in a broad range of business combinations with the corporation for three years after becoming an interested stockholder unless:

the board of directors of the corporation had previously approved either the business combination or the transaction that resulted in the stockholder's becoming an interested stockholder;

upon completion of the transaction that resulted in the stockholder's becoming an interested stockholder, that person owned at least 85% of the voting stock of the corporation outstanding at the time the transaction commenced, other than statutorily excluded shares; or

following the transaction in which that person became an interested stockholder, the business combination is approved by the board of directors of the corporation and holders of at least two-thirds of the outstanding voting stock not owned by the interested stockholder.

Under Section 203, the restrictions described above also do not apply to specific business combinations proposed by an interested stockholder following the announcement or notification of designated extraordinary transactions involving the corporation and a person who had not been an interested stockholder during the previous three years or who became an interested stockholder with the approval of a majority of the corporation's directors, if such

extraordinary transaction is approved or not opposed by a majority of the directors who were directors prior to any person becoming an interested stockholder during the previous three years or were recommended for election or elected to succeed such directors by a majority of such directors.

Section 203 may make it more difficult for a person who would be an interested stockholder to effect various business combinations with a corporation for a three-year period. Section 203 also may have the effect of preventing changes in our management and could make it more difficult to accomplish transactions that our stockholders may otherwise deem to be in their best interests.

Table of Contents

Anti-Takeover Effects of Some Provisions

Some provisions of our Certificate of Incorporation and Bylaws could make an acquisition of control of us by means of a proxy contest or otherwise more difficult, including our classified board and ability to issue preferred stock. These provisions are designed to discourage coercive takeover practices and inadequate takeover bids. These provisions are also designed to encourage persons seeking to acquire control of us to first negotiate with our board of directors. We believe that the benefits of increased protection give us the potential ability to negotiate with the proponent of an unfriendly or unsolicited proposal to acquire or restructure us, and that the benefits of this increased protection outweigh the disadvantages of discouraging those proposals, because negotiation of those proposals could result in an improvement of their terms.

Table of Contents

DESCRIPTION OF DEPOSITARY SHARES REPRESENTING PREFERRED STOCK

The applicable prospectus supplement will include a description of the material terms of any depositary shares representing preferred stock offered hereby.

DESCRIPTION OF DEBT SECURITIES

The following descriptions of the debt securities do not purport to be complete and are subject to and qualified in their entirety by reference to the indenture, a form of which has been filed with the SEC as an exhibit to the registration statement of which this prospectus is a part. Any future supplemental indenture or similar document also will be so filed. You should read the indenture and any supplemental indenture or similar document because they, and not this description, define your rights as holder of our debt securities. All capitalized terms have the meanings specified in the indenture.

As used in this prospectus, debt securities means the debentures, notes, bonds and other evidences of indebtedness that we may issue separately or upon exercise of a debt warrant from time to time. The debt securities may either be senior debt securities or subordinated debt securities. The debt securities we offer will be issued under an indenture between us and a trustee to be named therein. Debt securities, whether senior or subordinated, may be issued as convertible debt securities or exchangeable debt securities.

As used in this Description of Debt Securities, the terms Penumbra, we, our, and us refer to Penumbra, Inc. and not, unless otherwise specified, include our subsidiaries.

General Terms of the Indenture

The debt securities will be our direct unsecured obligations. The senior debt securities will rank equally with all of our other senior unsecured and unsubordinated debt. The subordinated debt securities will be subordinate and junior in right of payment to all of our present and future senior indebtedness to the extent and in the manner described in the prospectus supplement and, if applicable, in a pricing supplement, and as set forth in the supplemental indenture, board resolution or officers' certificate relating to such offering.

The indenture does not limit the amount of debt securities that we may issue. It provides that we may issue debt securities up to the principal amount that we may authorize and may be in any currency or currency unit designated by us. Except for the limitations on consolidation, merger and sale of all or substantially all of our assets contained in the indenture, the terms of the indenture do not contain any covenants or other provisions designed to afford holders of any debt securities protection with respect to our operations, financial condition or transactions involving us.

We may issue the debt securities issued under the indenture as discount securities, which means they may be sold at a discount below their stated principal amount. These debt securities, as well as other debt securities that are not issued at a discount, may, for U.S. federal income tax purposes, be treated as if they were issued with original issue discount, because of interest payment and other characteristics. Special U.S. federal income tax considerations applicable to debt securities issued with original issue discount will be described in more detail in any applicable prospectus supplement or pricing supplement, if any.

The applicable prospectus supplement for a series of debt securities that we issue, together with a pricing supplement, if any, will describe, among other things, the following terms of the offered debt securities:

the title;

the aggregate principal amount;

Table of Contents

whether issued in fully registered form without coupons or in a form registered as to principal only with coupons or in bearer form with coupons;

whether issued in the form of one or more global securities and whether all or a portion of the principal amount of the debt securities is represented thereby;

the price or prices at which the debt securities will be issued;

the date or dates on which principal is payable;

the place or places where and the manner in which principal, premium or interest will be payable and the place or places where the debt securities may be presented for transfer and, if applicable, conversion or exchange;

interest rates, and the dates from which interest, if any, will accrue, and the dates when interest is payable;

the right, if any, to extend the interest payment periods and the duration of the extensions;

our rights or obligations to redeem or purchase the debt securities, including sinking fund or partial redemption payments;

conversion or exchange provisions, if any, including conversion or exchange prices or rates and adjustments thereto;

the currency or currencies of payment of principal or interest;

the terms applicable to any debt securities issued at a discount from their stated principal amount;

the terms, if any, pursuant to which any debt securities will be subordinate to any of our other debt;

if the amount of payments of principal or interest is to be determined by reference to an index or formula, or based on a coin or currency other than that in which the debt securities are stated to be payable, the manner in which these amounts are determined and the calculation agent, if any, with respect thereto;

if other than the entire principal amount of the debt securities when issued, the portion of the principal amount payable upon acceleration of maturity as a result of a default on our obligations;

any provisions for the remarketing of the debt securities;

if applicable, covenants affording holders of debt protection with respect to our operations, financial condition or transactions involving us; and

any other specific terms of any debt securities.

The applicable prospectus supplement or pricing supplement, if any, will set forth certain U.S. federal income tax considerations for holders of any debt securities and the securities exchange or quotation system on which any debt securities are listed or quoted, if any.

Debt securities issued by us will be structurally subordinated to all indebtedness and other liabilities of our subsidiaries.

Unless otherwise provided in the applicable prospectus supplement, all securities of any one series need not be issued at the same time and may be issued from time to time without consent of any holder.

Subordination

The prospectus supplement or pricing supplement, if any, relating to any offering of subordinated debt securities will describe the specific subordination provisions, including the extent of subordination of payments by us of the principal of, premium, if any, and interest on such subordinated debt securities.

Table of Contents

Conversion or Exchange Rights

Debt securities may be convertible into or exchangeable for our other securities or property. The terms and conditions of conversion or exchange will be set forth in the applicable prospectus supplement or pricing supplement, if any. The terms will include, among others, the following:

the conversion or exchange price;

the conversion or exchange period;

provisions regarding the ability of us or the holder to convert or exchange the debt securities;

events requiring adjustment to the conversion or exchange price; and

provisions affecting conversion or exchange in the event of our redemption of the debt securities.

Consolidation, Merger or Sale

We cannot consolidate with or merge into, or convey, transfer or lease all or substantially all of our properties and assets to, any person unless (1) we will be the continuing corporation or (2) the successor corporation or person to which our assets are conveyed, transferred or leased is a corporation, partnership, trust or other entity organized and validly existing under the laws of the United States, any state of the United States or the District of Columbia and it expressly assumes our obligations on the debt securities and under the indenture. In addition, we cannot effect such a transaction unless immediately after giving effect to such transaction, no default or event of default under the indenture shall have occurred and be continuing. Subject to certain exceptions, when the person to whom our assets are transferred or leased has assumed our obligations under the debt securities and the indenture, we shall be discharged from all our obligations under the debt securities and the indenture, except in limited circumstances.

This covenant would not apply to any recapitalization transaction, a change of control of us or a highly leveraged transaction, unless the transaction or change of control were structured to include a merger or consolidation or transfer or lease of all or substantially all of our assets.

Events of Default

Unless otherwise indicated, the term Event of Default, when used in the indenture, means any of the following:

failure to pay interest for 30 days after the date payment is due and payable; provided that, an extension of an interest payment period in accordance with the terms of the debt securities shall not constitute a failure to pay interest;

failure to pay principal or premium, if any, on any debt security when due, either at maturity, upon any redemption, by declaration or otherwise;

failure to make sinking fund payments when due;

failure to perform any other covenant for 90 days after notice that performance was required;

certain events relating to bankruptcy, insolvency or reorganization; or

any other Event of Default provided in the applicable resolution of our board of directors or the officers certificate or supplemental indenture under which we issue a series of debt securities.

An Event of Default for a particular series of debt securities does not necessarily constitute an Event of Default for any other series of debt securities issued under the indenture. If an Event of Default relating to the payment of interest, principal or any sinking fund installment involving any series of debt securities has occurred and is continuing, the trustee or the holders of not less than 25% in aggregate principal amount of the debt securities of each affected series may declare the entire principal of all the debt securities of that series to be due and payable immediately.

Table of Contents

If an Event of Default relating to the performance of other covenants has occurred and is continuing for a period of 90 days after notice of such, or involves all of the series of senior debt securities, then the trustee or the holders of not less than 25% in aggregate principal amount of all of the series of senior debt securities may declare the entire principal amount of all of the series of senior debt securities due and payable immediately.

Similarly, if an Event of Default relating to the performance of other covenants has occurred and is continuing for a period of 90 days after notice of such, or involves all of the series of subordinated debt securities, then the trustee or the holders of not less than 25% in aggregate principal amount of all of the series of subordinated debt securities may declare the entire principal amount of all of the series of subordinated debt securities due and payable immediately.

If, however, the Event of Default relating to the performance of other covenants or any other Event of Default that has occurred and is continuing is for less than all of the series of senior debt securities or subordinated debt securities, as the case may be, then, the trustee or the holders of not less than 25% in aggregate principal amount of each affected series of the senior debt securities or the subordinated debt securities, as the case may be, may declare the entire principal amount of all debt securities of such affected series due and payable immediately. The holders of not less than a majority in aggregate principal amount of the debt securities of a series may, after satisfying conditions, rescind and annul any of the above-described declarations and consequences involving the series.

If an Event of Default relating to events in bankruptcy, insolvency or reorganization occurs and is continuing, then the principal amount of all of the debt securities outstanding, and any accrued interest, will automatically become due and payable immediately, without any declaration or other act by the trustee or any holder.

The indenture provides that the trustee shall within 90 days after the occurrence of default (or 30 days after it is known by the trustee) with respect to a particular series of debt securities, give the holders of the debt securities of such series notice of such default known to it; provided that, except in the case of a default or Event of Default in payment of the principal, premium, if any, of, or interest on, any debt security of such series or in the payment of any redemption obligation, the trustee may withhold the notice if, and so long as, it in good faith determines that withholding the notice is in the interests of the holders of debt securities of that series.

The indenture imposes limitations on suits brought by holders of debt securities against us. Except as provided below, no holder of debt securities of any series may institute any action against us under the indenture unless:

the holder has previously given to the trustee written notice of default and continuance of that default;

the holders of at least 25% in principal amount of the outstanding debt securities of the affected series have requested that the trustee institute the action;

the requesting holders have offered the trustee reasonable security or indemnity satisfactory to it for expenses and liabilities that may be incurred by bringing the action;

the trustee has not instituted the action within 60 days of the request; and

the trustee has not received inconsistent direction by the holders of a majority in principal amount of the outstanding debt securities of the series.

Notwithstanding the foregoing, each holder of debt securities of any series has the right, which is absolute and unconditional, to receive payment of the principal of and premium and interest, if any, on such debt securities when due and to institute suit for the enforcement of any such payment, and such rights may not be impaired without the consent of that holder of debt securities.

Table of Contents

We will be required to file annually with the trustee a certificate, signed by one of our officers, stating whether or not the officer knows of any default by us in compliance with any condition or covenant of the indenture.

Registered Global Securities

We may issue the debt securities of a series in whole or in part in the form of one or more fully registered global securities that we will deposit with a depositary or with a nominee for a depositary identified in the applicable prospectus supplement or pricing supplement, if any, and registered in the name of such depositary or nominee. In such case, we will issue one or more registered global securities denominated in an amount equal to the aggregate principal amount of all of the debt securities of the series to be issued and represented by such registered global security or securities.

Unless and until it is exchanged in whole or in part for debt securities in definitive registered form, a registered global security may not be transferred except as a whole:

by the depositary for such registered global security to its nominee;

by a nominee of the depositary to the depositary or another nominee of the depositary; or

by the depositary or its nominee to a successor of the depositary or a nominee of the successor.

The prospectus supplement or pricing supplement, if any, relating to a series of debt securities will describe the specific terms of the depositary arrangement with respect to any portion of such series represented by a registered global security. We anticipate that the following provisions will apply to all depositary arrangements for debt securities:

ownership of beneficial interests in a registered global security will be limited to persons that have accounts with the depositary for the registered global security, those persons being referred to as participants, or persons that may hold interests through participants;

upon the issuance of a registered global security, the depositary for the registered global security will credit, on its book-entry registration and transfer system, the participants' accounts with the respective principal amounts of the debt securities represented by the registered global security beneficially owned by the participants;

any dealers, underwriters, or agents participating in the distribution of the debt securities will designate the accounts to be credited; and

ownership of any beneficial interest in the registered global security will be shown on, and the transfer of any ownership interest will be effected only through, records maintained by the depositary for the registered

global security (with respect to interests of participants) and on the records of participants (with respect to interests of persons holding through participants).

The laws of some states may require that certain purchasers of securities take physical delivery of the securities in definitive form. These laws may limit the ability of those persons to own, transfer or pledge beneficial interests in registered global securities.

So long as the depositary for a registered global security, or its nominee, is the registered owner of the registered global security, the depositary or the nominee, as the case may be, will be considered the sole owner or holder of the debt securities represented by the registered global security for all purposes under the indenture. Except as set forth below, owners of beneficial interests in a registered global security:

will not be entitled to have the debt securities represented by a registered global security registered in their names;

Table of Contents

will not receive or be entitled to receive physical delivery of the debt securities in the definitive form; and

will not be considered the owners or holders of the debt securities under the indenture.

Accordingly, each person owning a beneficial interest in a registered global security must rely on the procedures of the depositary for the registered global security and, if the person is not a participant, on the procedures of a participant through which the person owns its interest, to exercise any rights of a holder under the indenture.

We understand that under existing industry practices, if we request any action of holders or if an owner of a beneficial interest in a registered global security desires to give or take any action that a holder is entitled to give or take under the indenture, the depositary for the registered global security would authorize the participants holding the relevant beneficial interests to give or take the action, and those participants would authorize beneficial owners owning through those participants to give or take the action or would otherwise act upon the instructions of beneficial owners holding through them.

We will make payments of principal and premium, if any, and interest, if any, on debt securities represented by a registered global security registered in the name of a depositary or its nominee to the depositary or its nominee, as the case may be, as the registered owners of the registered global security. None of Penumbra, the trustee or any other agent of Penumbra or the trustee will be responsible or liable for any aspect of the records relating to, or payments made on account of, beneficial ownership interests in the registered global security or for maintaining, supervising or reviewing any records relating to the beneficial ownership interests.

We expect that the depositary for any debt securities represented by a registered global security, upon receipt of any payments of principal and premium, if any, and interest, if any, in respect of the registered global security, will immediately credit participants' accounts with payments in amounts proportionate to their respective beneficial interests in the registered global security as shown on the records of the depositary. We also expect that standing customer instructions and customary practices will govern payments by participants to owners of beneficial interests in the registered global security held through the participants, as is now the case with the securities held for the accounts of customers in bearer form or registered in street name. We also expect that any of these payments will be the responsibility of the participants.

If the depositary for any debt securities represented by a registered global security is at any time unwilling or unable to continue as depositary or ceases to be a clearing agency registered under the Exchange Act, we will appoint an eligible successor depositary. If we fail to appoint an eligible successor depositary within 90 days, we will issue the debt securities in definitive form in exchange for the registered global security. In addition, we may at any time and in our sole discretion decide not to have any of the debt securities of a series represented by one or more registered global securities. In such event, we will issue debt securities of that series in a definitive form in exchange for all of the registered global securities representing the debt securities. The trustee will register any debt securities issued in definitive form in exchange for a registered global security in such name or names as the depositary, based upon instructions from its participants, shall instruct the trustee.

We may also issue bearer debt securities of a series in the form of one or more global securities, referred to as bearer global securities. We will deposit these bearer global securities with a common depositary for Euroclear Bank S.A./N.V., as operator of the Euroclear System, known as Euroclear and Clearstream Banking, société anonyme, Luxembourg, known as Clearstream, or with a nominee for the depositary identified in the prospectus supplement or pricing supplement, if any, relating to that series. The prospectus supplement or pricing supplement, if any, relating to a series of debt securities represented by a bearer global security will describe the specific terms and procedures, including the specific terms of the depositary arrangement and any specific procedures for the issuance of debt

securities in definitive form in exchange for a bearer global security, with respect to the portion of the series represented by a bearer global security.

Table of Contents

Discharge, Defeasance and Covenant Defeasance

We can discharge or defease our obligations under the indenture as set forth below. Unless otherwise set forth in the applicable prospectus supplement or pricing supplement, if any, the subordination provisions applicable to any subordinated debt securities will be expressly made subject to the discharge and defeasance provisions of the indenture.

We may discharge our obligations to holders of any series of debt securities that have not already been delivered to the trustee for cancellation and that have either become due and payable or are by their terms to become due and payable within one year (or are scheduled for redemption within one year). We may effect a discharge by irrevocably depositing with the trustee cash or U.S. government obligations or foreign government obligations, as applicable, as trust funds, in an amount certified to be sufficient to pay when due, whether at maturity, upon redemption or otherwise, the principal of, premium, if any, and interest on the debt securities and any mandatory sinking fund payments.

Unless otherwise provided in the applicable prospectus supplement or pricing supplement, if any, we may also discharge any and all of our obligations to holders of any series of debt securities at any time (legal defeasance). We also may be released from the obligations imposed by any covenants of any outstanding series of debt securities and provisions of the indenture, and we may omit to comply with those covenants without creating an Event of Default (covenant defeasance). We may effect legal defeasance and covenant defeasance only if, among other things:

we irrevocably deposit with the trustee cash or U.S. government obligations or foreign government obligations, as applicable, as trust funds, in an amount certified to be sufficient to pay at maturity (or upon redemption) the principal, premium, if any, and interest on all outstanding debt securities of the series; and

we deliver to the trustee an opinion of counsel from a nationally recognized law firm to the effect that the beneficial owners of the series of debt securities will not recognize income, gain or loss for U.S. federal income tax purposes as a result of the legal defeasance or covenant defeasance and that legal defeasance or covenant defeasance will not otherwise alter the beneficial owners' U.S. federal income tax treatment of principal, premium, if any, and interest payments on the series of debt securities, which opinion, in the case of legal defeasance, must be based on a ruling of the Internal Revenue Service issued, or a change in U.S. federal income tax law.

Although we may discharge or defease our obligations under the indenture as described in the two preceding paragraphs, we may not avoid, among other things, our duty to register the transfer or exchange of any series of debt securities, to replace any temporary, mutilated, destroyed, lost or stolen series of debt securities or to maintain an office or agency in respect of any series of debt securities.

Modification of the Indenture

The indenture provides that we and the trustee may enter into supplemental indentures without the consent of the holders of debt securities to:

secure any debt securities;

evidence the assumption by a successor corporation of our obligations;

add covenants for the protection of the holders of debt securities;

add one or more guarantees;

cure any ambiguity or correct any inconsistency in the indenture;

establish the forms or terms of debt securities of any series;

Table of Contents

conform any provision of the indenture to this description of debt securities, the description of the notes included in the applicable prospectus supplement or any other relevant section of the applicable prospectus supplement describing the terms of the debt securities;

evidence and provide for the acceptance of appointment by a successor trustee;

to provide for uncertificated debt securities in addition to or in place of certificated debt securities;

make any change that does not materially adversely affect the right of any holder; and

comply with requirements of the SEC in order to effect or maintain the qualification of the indenture under the Trust Indenture Act of 1939, as amended.

The indenture also provides that we and the trustee may, with the consent of the holders of not less than a majority in aggregate principal amount of debt securities of all series of senior debt securities or subordinated debt securities, as the case may be, then outstanding and affected (voting as one class), add any provisions to, or change in any manner, eliminate or modify in any way the provisions of, the indenture or modify in any manner the rights of the holders of the debt securities.

We and the trustee may not, however, without the consent of the holder of each outstanding debt security affected thereby:

extend the final maturity of any debt security;

reduce the principal amount or premium, if any;

reduce the rate or extend the time of payment of interest;

reduce any amount payable on redemption;

change the currency in which the principal (other than as may be provided otherwise with respect to a series), premium, if any, or interest is payable;

reduce the amount of the principal of any debt security issued with an original issue discount that is payable upon acceleration or provable in bankruptcy;

modify any of the subordination provisions or the definition of senior indebtedness applicable to any subordinated debt securities in a manner adverse to the holders of those securities;

alter provisions of the indenture relating to the debt securities not denominated in U.S. dollars;

impair the right to institute suit for the enforcement of any payment on any debt security when due;

reduce the percentage of holders of debt securities of any series whose consent is required for any modification of the indenture, or the consent of whose holders is required for any waiver (of compliance with certain provisions of the indenture or certain defaults thereunder and their consequences) provided for in the indenture; or

modify any provisions set forth in this paragraph.

Concerning the Trustee

The indenture provides that there may be more than one trustee under the indenture, each with respect to one or more series of debt securities. If there are different trustees for different series of debt securities, each trustee will be a trustee of a trust under the indenture separate and apart from the trust administered by any other trustee under the indenture. Except as otherwise indicated in this prospectus or any prospectus supplement, any action permitted to be taken by a trustee may be taken by such trustee only with respect to the one or more series of debt securities for which it is the trustee under the indenture. Any trustee under the indenture may resign or be removed with respect to one or more series of debt securities. All payments of principal of, premium, if any, and

Table of Contents

interest on, and all registration, transfer, exchange, authentication and delivery (including authentication and delivery on original issuance of the debt securities) of, the debt securities of a series will be effected by the trustee with respect to that series at an office designated by the trustee in New York, New York.

The indenture contains limitations on the right of the trustee, should it become a creditor of us, to obtain payment of claims in some cases or to realize on certain property received in respect of any such claim as security or otherwise. The trustee may engage in other transactions. If it acquires any conflicting interest relating to any duties with respect to the debt securities, however, it must eliminate the conflict or resign as trustee.

The holders of a majority in aggregate principal amount of any series of debt securities then outstanding will have the right to direct the time, method and place of conducting any proceeding for exercising any remedy available to the trustee with respect to such series of debt securities, provided that, the direction would not conflict with any rule of law or with the indenture, would not be unduly prejudicial to the rights of another holder of the debt securities, and would not involve any trustee in personal liability. The indenture provides that in case an Event of Default shall occur and be known to any trustee and not be cured, the trustee must use the same degree of care as a prudent person would use in the conduct of his or her own affairs in the exercise of the trustee's power. Subject to these provisions, the trustee will be under no obligation to exercise any of its rights or powers under the indenture at the request of any of the holders of the debt securities, unless they shall have offered to the trustee security and indemnity satisfactory to the trustee.

No Individual Liability of Incorporators, Stockholders, Officers or Directors

The indenture provides that no incorporator and no past, present or future stockholder, officer or director, of us or any successor corporation in their capacity as such shall have any individual liability for any of our obligations, covenants or agreements under the debt securities or the indenture.

Governing Law

The indenture and the debt securities will be governed by, and construed in accordance with, the laws of the State of New York, including, without limitation, Sections 5-1401 and 5-1402 of the New York General Obligations Law and New York Civil Practice Law and Rules 327(b).

Table of Contents

DESCRIPTION OF WARRANTS

We may issue warrants to purchase our debt or equity securities or securities of third parties or other rights, including rights to receive payment in cash or securities based on the value, rate or price of one or more specified commodities, currencies, securities or indices, or any combination of the foregoing. Warrants may be issued independently or together with any other securities and may be attached to, or separate from, such securities. Each series of warrants will be issued under a separate warrant agreement to be entered into between us and a warrant agent. The terms of any warrants to be issued and a description of the material provisions of the applicable warrant agreement will be set forth in the applicable prospectus supplement.

The applicable prospectus supplement will describe the following terms of any warrants in respect of which this prospectus is being delivered:

the title of such warrants;

the aggregate number of such warrants;

the price or prices at which such warrants will be issued;

the currency or currencies in which the price of such warrants will be payable;

the securities or other rights, including rights to receive payment in cash or securities based on the value, rate or price of one or more specified commodities, currencies, securities or indices, or any combination of the foregoing, purchasable upon exercise of such warrants;

the price at which and the currency or currencies in which the securities or other rights purchasable upon exercise of such warrants may be purchased;

the date on which the right to exercise such warrants shall commence and the date on which such right shall expire;

if applicable, the minimum or maximum amount of such warrants which may be exercised at any one time;

if applicable, the designation and terms of the securities with which such warrants are issued and the number of such warrants issued with each such security;

if applicable, the date on and after which such warrants and the related securities will be separately transferable;

information with respect to book-entry procedures, if any;

if applicable, a discussion of any material United States Federal income tax considerations; and

any other terms of such warrants, including terms, procedures and limitations relating to the exchange and exercise of such warrants.

Table of Contents

DESCRIPTION OF PURCHASE CONTRACTS

We may issue purchase contracts for the purchase or sale of:

debt or equity securities issued by us or securities of third parties, a basket of such securities, an index or indices or such securities or any combination of the above as specified in the applicable prospectus supplement;

currencies; or

commodities.

Each purchase contract will entitle the holder thereof to purchase or sell, and obligate us to sell or purchase, on specified dates, such securities, currencies or commodities at a specified purchase price, which may be based on a formula, all as set forth in the applicable prospectus supplement. We may, however, satisfy our obligations, if any, with respect to any purchase contract by delivering the cash value of such purchase contract or the cash value of the property otherwise deliverable or, in the case of purchase contracts on underlying currencies, by delivering the underlying currencies, as set forth in the applicable prospectus supplement. The applicable prospectus supplement will also specify the methods by which the holders may purchase or sell such securities, currencies or commodities and any acceleration, cancellation or termination provisions or other provisions relating to the settlement of a purchase contract.

The purchase contracts may require us to make periodic payments to the holders thereof or vice versa, which payments may be deferred to the extent set forth in the applicable prospectus supplement, and those payments may be unsecured or prefunded on some basis. The purchase contracts may require the holders thereof to secure their obligations in a specified manner to be described in the applicable prospectus supplement. Alternatively, purchase contracts may require holders to satisfy their obligations thereunder when the purchase contracts are issued. Our obligation to settle such pre-paid purchase contracts on the relevant settlement date may constitute indebtedness. Accordingly, pre-paid purchase contracts will be issued under either the senior indenture or the subordinated indenture.

DESCRIPTION OF UNITS

As specified in the applicable prospectus supplement, we may issue units consisting of one or more purchase contracts, warrants, debt securities, shares of preferred stock, shares of common stock or any combination of such securities. The applicable supplement will describe:

the terms of the units and of the warrants, debt securities and common stock comprising the units, including whether and under what circumstances the securities comprising the units may be traded separately;

a description of the terms of any unit agreement governing the units; and

a description of the provisions for the payment, settlement, transfer or exchange of the units.

Table of Contents

FORMS OF SECURITIES

Each debt security, warrant and unit will be represented either by a certificate issued in definitive form to a particular investor or by one or more global securities representing the entire issuance of securities. Certificated securities in definitive form and global securities will be issued in registered form. Definitive securities name you or your nominee as the owner of the security, and in order to transfer or exchange these securities or to receive payments other than interest or other interim payments, you or your nominee must physically deliver the securities to the trustee, registrar, paying agent or other agent, as applicable. Global securities name a depositary or its nominee as the owner of the debt securities, warrants and units represented by these global securities. The depositary maintains a computerized system that will reflect each investor's beneficial ownership of the securities through an account maintained by the investor with its broker/dealer, bank, trust company or other representative, as we explain more fully below.

Global Securities

Registered Global Securities. We may issue the registered debt securities, warrants and units in the form of one or more fully registered global securities that will be deposited with a depositary or its nominee identified in the applicable prospectus supplement and registered in the name of that depositary or nominee. In those cases, one or more registered global securities will be issued in a denomination or aggregate denominations equal to the portion of the aggregate principal or face amount of the securities to be represented by registered global securities. Unless and until it is exchanged in whole for securities in definitive registered form, a registered global security may not be transferred except as a whole by and among the depositary for the registered global security, the nominees of the depositary or any successors of the depositary or those nominees.

If not described below, any specific terms of the depositary arrangement with respect to any securities to be represented by a registered global security will be described in the prospectus supplement relating to those securities. We anticipate that the following provisions will apply to all depositary arrangements.

Ownership of beneficial interests in a registered global security will be limited to persons, called participants, that have accounts with the depositary or persons that may hold interests through participants. Upon the issuance of a registered global security, the depositary will credit, on its book-entry registration and transfer system, the participants accounts with the respective principal or face amounts of the securities beneficially owned by the participants. Any dealers, underwriters or agents participating in the distribution of the securities will designate the accounts to be credited. Ownership of beneficial interests in a registered global security will be shown on, and the transfer of ownership interests will be effected only through, records maintained by the depositary, with respect to interests of participants, and on the records of participants, with respect to interests of persons holding through participants. The laws of some states may require that some purchasers of securities take physical delivery of these securities in definitive form. These laws may impair your ability to own, transfer or pledge beneficial interests in registered global securities.

So long as the depositary, or its nominee, is the registered owner of a registered global security, that depositary or its nominee, as the case may be, will be considered the sole owner or holder of the securities represented by the registered global security for all purposes under the applicable indenture, warrant agreement, guaranteed trust preferred security or unit agreement. Except as described below, owners of beneficial interests in a registered global security will not be entitled to have the securities represented by the registered global security registered in their names, will not receive or be entitled to receive physical delivery of the securities in definitive form and will not be considered the owners or holders of the securities under the applicable indenture, warrant agreement, guaranteed trust preferred security or unit agreement. Accordingly, each person owning a beneficial interest in a registered global security must rely on the procedures of the depositary for that registered global security and, if that person is not a participant, on the

procedures of the participant through which the person owns its interest, to exercise any rights of a holder under the applicable indenture, warrant agreement, guaranteed trust preferred security or unit agreement. We understand that under existing industry practices, if we request any

Table of Contents

action of holders or if an owner of a beneficial interest in a registered global security desires to give or take any action that a holder is entitled to give or take under the applicable indenture, warrant agreement, guaranteed trust preferred security or unit agreement, the depositary for the registered global security would authorize the participants holding the relevant beneficial interests to give or take that action, and the participants would authorize beneficial owners owning through them to give or take that action or would otherwise act upon the instructions of beneficial owners holding through them.

Principal, premium, if any, and interest payments on debt securities, and any payments to holders with respect to warrants, guaranteed trust preferred securities or units, represented by a registered global security registered in the name of a depositary or its nominee will be made to the depositary or its nominee, as the case may be, as the registered owner of the registered global security. None of Penumbra, the trustees, the warrant agents, the unit agents or any other agent of Penumbra, agent of the trustees or agent of the warrant agents or unit agents will have any responsibility or liability for any aspect of the records relating to payments made on account of beneficial ownership interests in the registered global security or for maintaining, supervising or reviewing any records relating to those beneficial ownership interests.

We expect that the depositary for any of the securities represented by a registered global security, upon receipt of any payment of principal, premium, interest or other distribution of underlying securities or other property to holders on that registered global security, will immediately credit participants' accounts in amounts proportionate to their respective beneficial interests in that registered global security as shown on the records of the depositary. We also expect that payments by participants to owners of beneficial interests in a registered global security held through participants will be governed by standing customer instructions and customary practices, as is now the case with the securities held for the accounts of customers in bearer form or registered in street name, and will be the responsibility of those participants.

If the depositary for any of these securities represented by a registered global security is at any time unwilling or unable to continue as depositary or ceases to be a clearing agency registered under the Exchange Act, and a successor depositary registered as a clearing agency under the Exchange Act is not appointed by us within 90 days, we will issue securities in definitive form in exchange for the registered global security that had been held by the depositary. Any securities issued in definitive form in exchange for a registered global security will be registered in the name or names that the depositary gives to the relevant trustee, warrant agent, unit agent or other relevant agent of ours or theirs. It is expected that the depositary's instructions will be based upon directions received by the depositary from participants with respect to ownership of beneficial interests in the registered global security that had been held by the depositary.

Table of Contents

SELLING SECURITYHOLDERS

Information about selling security holders, if any, will be set forth in a prospectus supplement, in a post-effective amendment to the registration statement of which this prospectus is a part or in filings we make with the SEC under the Exchange Act, that are incorporated by reference.

VALIDITY OF SECURITIES

The validity of the securities in respect of which this prospectus is being delivered will be passed on for us by Davis Polk & Wardwell LLP, Menlo Park, California.

EXPERTS

The consolidated financial statements incorporated in this prospectus by reference from the Company's Annual Report on Form 10-K, and the effectiveness of the Company's internal control over financial reporting have been audited by Deloitte & Touche LLP, an independent registered public accounting firm, as stated in their reports, which are incorporated herein by reference (which reports (1) express an unqualified opinion on the financial statements and includes an explanatory paragraph referring to the early adoption of Financial Accounting Standards Board Accounting Standards Update 2016-09, *Compensation - Stock Compensation: Improvements to Employee Share-Based Payment Accounting*, and (2) express an unqualified opinion on the effectiveness of internal control over financial reporting). Such consolidated financial statements have been so incorporated in reliance upon the reports of such firm given upon their authority as experts in accounting and auditing.

Table of Contents

1,300,000 shares

Common Stock

PROSPECTUS SUPPLEMENT

J.P. Morgan

BofA Merrill Lynch

Wells Fargo Securities

March 16, 2017

Canaccord Genuity