MORGAN STANLEY
Form 424B2
January 16, 2019

CALCULATION OF REGISTRATION FEE

Title of Each Class of Securities Offered	*Maximum Aggregate Offering Price*	*Amount of Registration Fee*
Buffered Digital Index-Linked Notes due 2020	$10,275,000	$1,245.33

PROSPECTUS Dated November 16, 2017

PROSPECTUS SUPPLEMENT Dated November 16, 2017

Pricing Supplement No. 1,445 to
Registration Statement Nos. 333-221595; 333-221595-01
Dated January 14, 2019
Rule 424(b)(2)

Morgan Stanley Finance LLC

STRUCTURED INVESTMENTS

Opportunities in Commodities
$10,275,000

Buffered Digital S&P GSCI™ Crude Oil Index - Excess Return-Linked Notes due February 19, 2020

Fully and Unconditionally Guaranteed by Morgan Stanley

Principal at Risk Securities

The notes are unsecured obligations of Morgan Stanley Finance LLC ("MSFL") and are fully and unconditionally guaranteed by Morgan Stanley. The notes will not bear interest. The amount that you will be paid on your notes on the stated maturity date (February 19, 2020, subject to postponement) is based on the performance of the S&P GSCI™ Crude Oil Index - Excess Return as measured from the trade date (January 14, 2019) to and including the determination date (February 14, 2020, subject to postponement). If the final underlier level on the determination date is greater than or equal to 85% of the initial underlier level, you will receive an amount equal to the maximum settlement amount ($1,185.50 for each $1,000 face amount of your notes). **However, if the underlier declines by more than 15.00% from the initial underlier level, the return on your notes will be negative. You could lose your entire investment in the notes.** These notes are for investors who seek a return based on crude oil, as measured by the underlier, and who are willing to risk their principal and forgo current income and returns above the maximum settlement amount in exchange for the maximum settlement amount feature that applies only if the underlier return is greater than or equal to -15.00%. The notes are notes issued as part of MSFL's Series A Global Medium-Term Notes program.

All payments are subject to our credit risk. If we default on our obligations, you could lose some or all of your investment. These notes are not secured obligations and you will not have any security interest in, or otherwise have any access to, any underlying reference asset or assets.

The underlier has returns based on the change in price of futures contracts on West Texas Intermediate crude oil, not the change in the spot price of the actual physical commodity to which such futures contracts relate. While the changes in the price of a futures contract are usually correlated with the changes in the spot price, such correlation is not exact. In some cases, the performance of a commodity futures contract can deviate significantly from the spot price performance of the related underlying commodity, especially over longer periods of time. Accordingly, investments linked to the return of commodities futures contracts may underperform similar investments that reflect the spot price return on physical commodities.

To determine your payment at maturity, we will calculate the underlier return, which is the percentage increase or decrease in the final underlier level from the initial underlier level. On the stated maturity date, for each $1,000 face amount of your notes, you will receive an amount in cash equal to:

if the underlier return is *greater than* or *equal to* -15.00% (the final underlier level is greater than or equal to 85.00% of the initial underlier level), the maximum settlement amount of $1,185.50 per note, or 118.55% of the face amount; or

if the underlier return is *less than* -15.00% (the final underlier level is less than 85.00% of the initial underlier level), the *sum* of (i) $1,000 *plus* (ii) the *product* of (a) $1,000 *times* (b) approximately 1.1765 *times* (c) the *sum* of the underlier return *plus* 15.00%.

Under these circumstances, you will lose some or all of your investment.

You should read the additional disclosure herein so that you may better understand the terms and risks of your investment.

The estimated value on the trade date is $980.00 per note. See "Estimated Value" on page 2.

	Price to public[(1)]	*Agent's commissions[(1)]*	*Proceeds to us[(2)]*
Per note	*$1,000*	*$9.50*	*$990.50*
Total	*$10,275,000*	*$97,612.50*	*$10,177,387.50*

(1) The price to public is 99.05% for certain investors; see "Summary Information—Supplemental information regarding plan of distribution; conflicts of interest" on page 9. Morgan Stanley & Co. LLC ("MS & Co.") will sell all of the notes that it purchases from us to an unaffiliated dealer. Investors that purchase and hold the notes in fee-based accounts may be charged fees based on the amount of assets held in those accounts, including the notes.

(2) See "Summary Information—Use of proceeds and hedging" beginning on page 7.

The notes involve risks not associated with an investment in ordinary debt securities. See "Risk Factors" beginning on page 14.

The Securities and Exchange Commission and state securities regulators have not approved or disapproved these notes, or determined if this document or the accompanying prospectus supplement and prospectus is truthful or complete. Any representation to the contrary is a criminal offense.

The notes are not deposits or savings accounts and are not insured by the Federal Deposit Insurance Corporation or any other governmental agency or instrumentality, nor are they obligations of, or guaranteed by, a bank.

You should read this document together with the related prospectus supplement and prospectus, each of which can be accessed via the hyperlinks below. Please also see "Key Terms" on page 3.

MORGAN STANLEY

About Your Prospectus

The notes are notes issued as part of MSFL's Series A Global Medium-Term Notes program. This prospectus includes this pricing supplement and the accompanying documents listed below. This pricing supplement constitutes a supplement to the documents listed below and should be read in conjunction with such documents:

· Prospectus dated November 16, 2017

· Prospectus Supplement dated November 16, 2017

The information in this pricing supplement supersedes any conflicting information in the documents listed above. In addition, some of the terms or features described in the listed documents may not apply to your notes.

ESTIMATED VALUE

The Original Issue Price of each note is $1,000. This price includes costs associated with issuing, selling, structuring and hedging the notes, which are borne by you, and, consequently, the estimated value of the notes on the Trade Date is less than $1,000. We estimate that the value of each note on the Trade Date is $980.00.

What goes into the estimated value on the Trade Date?

In valuing the notes on the Trade Date, we take into account that the notes comprise both a debt component and a performance-based component linked to the Underlier. The estimated value of the notes is determined using our own pricing and valuation models, market inputs and assumptions relating to the Underlier, instruments based on the Underlier, volatility and other factors including current and expected interest rates, as well as an interest rate related to our secondary market credit spread, which is the implied interest rate at which our conventional fixed rate debt trades in the secondary market.

What determines the economic terms of the notes?

In determining the economic terms of the notes, including the Maximum Settlement Amount and the Threshold Amount, we use an internal funding rate, which is likely to be lower than our secondary market credit spreads and therefore advantageous to us. If the issuing, selling, structuring and hedging costs borne by you were lower or if the internal funding rate were higher, one or more of the economic terms of the notes would be more favorable to you.

What is the relationship between the estimated value on the Trade Date and the secondary market price of the notes?

The price at which MS & Co. purchases the notes in the secondary market, absent changes in market conditions, including those related to the Underlier, may vary from, and be lower than, the estimated value on the Trade Date, because the secondary market price takes into account our secondary market credit spread as well as the bid-offer spread that MS & Co. would charge in a secondary market transaction of this type and other factors. However, because the costs associated with issuing, selling, structuring and hedging the notes are not fully deducted upon issuance, for a period of up to 3 months following the issue date, to the extent that MS & Co. may buy or sell the notes in the secondary market, absent changes in market conditions, including those related to the Underlier, and to our secondary market credit spreads, it would do so based on values higher than the estimated value. We expect that those higher values will also be reflected in your brokerage account statements.

MS & Co. may, but is not obligated to, make a market in the notes, and, if it once chooses to make a market, may cease doing so at any time.

SUMMARY INFORMATION

The Buffered Digital S&P GSCI™ Crude Oil Index - Excess Return-Linked Notes, which we refer to as the notes, are unsecured obligations of MSFL and are fully and unconditionally guaranteed by Morgan Stanley. The notes will pay no interest, do not guarantee any return of principal at maturity and have the terms described in the accompanying prospectus supplement and prospectus, as supplemented or modified by this document. The notes are notes issued as part of MSFL's Series A Global Medium-Term Notes program.

References to "we," "us" and "our" refer to Morgan Stanley or MSFL, or Morgan Stanley and MSFL collectively, as the context requires.

If the terms described herein are inconsistent with those described in the accompanying prospectus supplement or prospectus, the terms described herein shall control.

Key Terms

Issuer: Morgan Stanley Finance LLC

Guarantor: Morgan Stanley

Underlier: S&P GSCI™ Crude Oil Index - Excess Return (Bloomberg Ticker Symbol: SPGCCLP) (The Bloomberg ticker symbol is being provided for reference purposes only. The Closing Level of the Underlier on any Underlier Business Day will be determined based on the price published by the publisher of the Underlier)

Underlier Publisher: S&P Dow Jones Indices LLC ("S&P") and any successor publisher thereof

Specified currency: U.S. dollars ("$")

Face Amount: Each note will have a Face Amount of $1,000; $10,275,000 in the aggregate for all the notes; the aggregate Face Amount of notes may be increased if the Issuer, at its sole option, decides to sell an additional amount of the notes on a date subsequent to the date hereof.

Denominations: $1,000 and integral multiples thereof

Purchase at amount other than Face Amount: The amount we will pay you on the Stated Maturity Date for your notes will not be adjusted based on the issue price you pay for your notes, so if you acquire notes at a premium (or discount) to the Face Amount and hold them to the Stated Maturity Date, it could affect your investment in a number of ways. The return on your investment in such notes will be lower (or higher) than it would have been had you purchased the notes at the Face Amount. Also, the Threshold Level would not offer the same measure of protection to your investment as would be the case if you had purchased the notes at the Face Amount. Additionally, the Maximum Settlement Amount would represent a lower (or higher) percentage return than it would have had you purchased the notes at the Face Amount. See "Risk Factors—If You Purchase Your Notes At A Premium To The Face Amount, The Return On Your Investment Will Be Lower Than The Return On Notes Purchased At The Face Amount, And The Impact Of Certain Key Terms Of The Notes Will Be Negatively Affected" beginning on page 17 of this document.

Cash Settlement Amount (on the Stated Maturity Date): For each $1,000 Face Amount of notes, we will pay you on the Stated Maturity Date an amount in cash equal to:

· if the Final Underlier Level is *greater than* or *equal to* the Threshold Level, the Maximum Settlement Amount; or

· if the Final Underlier Level is *less than* the Threshold Level, the *sum* of (i) $1,000 *plus* (ii) the *product* of (a) $1,000 *times* (b) the Buffer Rate *times* (c) the *sum* of the Underlier Return and the Threshold Amount.

You will lose some or all of your investment at maturity if the Final Underlier Level is less than the Threshold Level. Any payment of the Cash Settlement Amount is subject to our credit risk.

Initial Underlier Level: 154.1408

Final Underlier Level: The Closing Level of the Underlier on the Determination Date, except in the limited circumstances described under "Determination Date" below, and subject to adjustment as provided under "Discontinuance of the Underlier; alteration of method of calculation" below.

Underlier Return: The *quotient* of (i) the Final Underlier Level *minus* the Initial Underlier Level *divided* by (ii) the Initial Underlier Level, expressed as a percentage

Maximum Settlement Amount: $1,185.50 for each $1,000 Face Amount of notes (which is comprised of the $1,000 Face Amount *plus* an upside payment of $185.50)

Threshold Level: 131.01968, which is 85% of the Initial Underlier Level

Threshold Amount: 15%

Buffer Rate: The *quotient* of the Initial Underlier Level *divided* by the Threshold Level, which equals approximately 117.65%

Trade Date: January 14, 2019

Original Issue Date (Settlement Date): January 22, 2019 (5 Business Days after the Trade Date)

Determination Date: February 14, 2020; provided that if the Determination Date is not an Underlier Business Day, the Determination Date shall be the next succeeding Underlier Business Day; provided further that if a Market Disruption Event relating to the Underlier or one or more commodity contracts underlying the Underlier (each, an "Underlier Contract") occurs on the Determination Date, the Closing Level for the Determination Date shall be determined in accordance with the next succeeding paragraph.

If a Market Disruption Event relating to the Underlier or any Underlier Contract occurs on the Determination Date, the Calculation Agent will calculate the Closing Level using as a price (i) for each Underlier Contract that **did not** suffer a Market Disruption Event on the Determination Date, the official settlement price of such Underlier Contract on the Determination Date and (ii) for each Underlier Contract that **did** suffer a Market Disruption Event on such date, the

official settlement price of such Underlier Contract on the first succeeding Trading Day on which no Market Disruption Event is existing with respect to such Underlier Contract; provided that, if a Market Disruption Event occurs with respect to such Underlier Contract on each of the five consecutive Trading Days immediately succeeding the Determination Date, the Calculation Agent will determine the price of such Underlier Contract for the Determination Date on the fifth succeeding Trading Day by requesting the principal office of each of the three leading dealers in the relevant market, selected by the Calculation Agent, to provide a quotation for the relevant price. If such quotations are provided as requested, the price of the relevant Underlier Contract for the Determination Date shall be the arithmetic mean of such quotations. Quotations of MS & Co., MSCG (as defined below) or any of their respective affiliates may be included in the calculation of such mean, but only to the extent that any such bid is the highest of the quotes obtained. If fewer than three quotations are provided as requested, the price of the relevant Underlier Contract for the Determination Date shall be determined by the Calculation Agent in its sole discretion (acting in good faith) taking into account any information that it deems relevant. In calculating the Closing Level in the circumstances described in this paragraph, the Calculation Agent will use the formula for calculating the Underlier last in effect prior to the Determination Date; provided that if the relevant Market Disruption Event in respect of the Underlier is due to a Material Change in Formula, the Calculation Agent will use the formula last in effect prior to that Market Disruption Event.

Stated Maturity Date: February 19, 2020, subject to postponement as described below; *provided* that if the scheduled Stated Maturity Date is not a Business Day, we will pay you the Cash Settlement Amount, if any, on the next succeeding Business Day with the same force and effect as if paid on the scheduled Stated Maturity Date.

Postponement of Stated Maturity Date: If the scheduled Determination Date is not a Trading Day or if a Market Disruption Event occurs on that day so that the Determination Date as postponed falls less than two Business Days prior to the scheduled Stated Maturity Date, the Stated Maturity Date of the notes will be postponed to the second Business Day following that Determination Date as postponed.

No interest or dividends: The notes will not pay interest or dividends.

No listing: The notes will not be listed on any securities exchange.

No redemption: The notes will not be subject to any redemption right.

Closing Level: The Closing Level on any Underlier Business Day will be determined by the Calculation Agent and will equal the official settlement price of the Underlier as published by the Underlier Publisher, or any Successor Underlier (as defined under "Discontinuance of the Underlier; alteration of method of calculation" below). In certain circumstances, the Closing Level will be based on the alternate calculation of the Underlier described under "Discontinuance of the Underlier; alteration of method of calculation."

Reuters and various other third party sources may report the official settlement price of the Underlier. If any such reported price differs from that as determined by the Underlier Publisher or its successor, the official settlement price published by such Underlier Publisher or its successor will prevail.

Business Day: Any day, other than a Saturday or Sunday, that is neither a legal holiday nor a day on which banking institutions are authorized or required by law or regulation to close in The City of New York.

Underlier Business Day: Any day on which the official settlement price of the Underlier is scheduled to be published by the Underlier Publisher or its successor.

Trading Day: With respect to any Underlier Contract, a day, as determined by the Calculation Agent, on which the Relevant Exchange for such Underlier Contract is open for trading during its regular trading session, notwithstanding any such Relevant Exchange closing prior to its scheduled closing time.

Market Disruption Event: Market Disruption Event means (i) with respect to the Underlier, any of a Price Source Disruption, Disappearance of Commodity Reference Price, Material Change in Formula or Material Change in Content, or (ii) with respect to any Underlier Contract, any of a Price Source Disruption, Disappearance of Commodity Reference Price, Trading Disruption or Tax Disruption, in each case, as determined by the Calculation Agent in its sole discretion.

Price Source Disruption: Price Source Disruption means (a) with respect to the Underlier, either (i) the temporary failure of the Underlier Publisher to announce or publish the official settlement price of such Underlier (or the price of any Successor Underlier, if applicable), or the information necessary for determining such price (or the price of any Successor Underlier, if applicable) or (ii) the temporary discontinuance or unavailability of such Underlier, and (b) with respect to any Underlier Contract, the temporary or permanent failure of any Relevant Exchange to announce or publish the relevant price for such Underlier Contract.

Trading Disruption: Trading Disruption means, with respect to any Underlier Contract, the material suspension of, or the material limitation imposed on, trading in an Underlier Contract or futures contracts related to such Underlier Contract on the Relevant Exchange for such Underlier Contract. For these purposes, a limitation of trading in an Underlier Contract or futures contracts related to such Underlier Contract shall be deemed to be material only if the Relevant Exchange establishes limits on the range within which the price of the Underlier Contract or futures contracts related to such Underlier Contract may fluctuate and the closing or settlement price of the Underlier Contract or futures contracts related to such Underlier Contract is at the upper or lower limit of that range.

Disappearance of Commodity Reference Price: Disappearance of Commodity Reference Price means (a) with respect to the Underlier, the disappearance or permanent discontinuance or unavailability of the official settlement price of such Underlier, notwithstanding the availability of the price source or the status of trading in the Underlier Contracts or futures contracts related to the Underlier Contracts, and (b) with respect to any Underlier Contract, either (i) the failure of trading to commence, or the permanent discontinuance of trading, in such Underlier Contract or futures contracts related to such Underlier Contract on the Relevant Exchange for such Underlier Contract or (ii) the disappearance of, or of trading in, such Underlier Contract.

For purposes of this definition, a discontinuance of publication of the Underlier will not be a Disappearance of Commodity Reference Price if MSCG has selected a Successor Underlier in accordance with “Discontinuance of the Underlier; alteration of method of calculation.”

Material Change in Formula: Material Change in Formula means the occurrence since the date of this pricing supplement of a material change in the formula for, or the method of calculating, the official settlement price of the Underlier.

Material Change in Content: Material Change in Content means the occurrence since the date of this pricing supplement of a material change in the content, composition or constitution of the Underlier or relevant futures contracts.

Tax Disruption: With respect to any Underlier Contract, Tax Disruption means the imposition of, change in or removal of an excise, severance, sales, use, value-added, transfer, stamp, documentary, recording or similar tax on, or measured by reference to, such Underlier Contract (other than a tax on, or measured by reference to overall gross or net income) by any government or taxation authority after the date of this pricing supplement, if the direct effect of such imposition, change or removal is to raise or lower the price of such Underlier Contract on any day that would otherwise be the Determination Date from what it would have been without that imposition, change or removal.

Relevant Exchange: With respect to the any Underlier Contract, Relevant Exchange means the principal exchange or trading market for such Underlier Contract.

Discontinuance of the Underlier; alteration of method of calculation: If, following the Trade Date, the Underlier Publisher discontinues publication of the Underlier and the Underlier Publisher or another entity (including MSCG or MS & Co.) publishes a successor or substitute index that MSCG, as the Calculation Agent, determines, in its sole discretion, to be comparable to the discontinued Underlier (such Underlier being referred to herein as a "Successor Underlier"), then any subsequent Closing Level will be determined by reference to the published value of such Successor Underlier at the regular weekday close of trading on the Underlier Business Day that any Closing Level is to be determined, and, to the extent the Closing Level of the Successor Underlier differs from the Closing Level of the Underlier at the time of such substitution, proportionate adjustments will be made by the Calculation Agent to the Initial Underlier Level.

Upon any selection by the Calculation Agent of a Successor Underlier, the Calculation Agent will cause written notice thereof to be furnished to the Trustee, to the Issuer and to DTC, as holder of the notes, within three Business Days of such selection. We expect that such notice will be made available to you, as a beneficial owner of the notes, in accordance with the standard rules and procedures of DTC and its direct and indirect participants.

If the Underlier Publisher discontinues publication of the Underlier prior to, and such discontinuance is continuing on, the Determination Date and the Calculation Agent determines, in its sole discretion, that no Successor Underlier is available on such date, then the Calculation Agent will determine the price for such Underlier on the Determination Date using the formula for calculating such Underlier last in effect prior to such discontinuance.

If the method of calculating the Underlier or a Successor Underlier is modified so that the value of such Underlier is a fraction of what it would have been if it had not been modified (e.g., due to a split in the Underlier), and the Calculation Agent, in its sole discretion, determines that such modification is not a Material Change in Formula, then

the Calculation Agent will adjust such Underlier in order to arrive at a price of such Underlier or Successor Underlier as if it had not been modified (e.g., as if such split had not occurred).

Acceleration amount in case of an event of default: In case an event of default with respect to the notes shall have occurred and be continuing, the amount declared due and payable per note upon any acceleration of the notes shall be an amount in cash equal to the value of such note on the day that is two business days prior to the date of such acceleration, as determined by the Calculation Agent (acting in good faith and in a commercially reasonable manner) by reference to factors that the Calculation Agent considers relevant, including, without limitation: (i) then-current market interest rates; (ii) our credit spreads as of the Trade Date, without adjusting for any subsequent changes to our creditworthiness; and (iii) the then-current value of the performance-based component of such note. Because the Calculation Agent will take into account movements in market interest rates, any increase in market interest rates since the Trade Date will lower the value of your claim in comparison to if such movements were not taken into account.

Use of proceeds and hedging: The proceeds from the sale of the notes will be used by us for general corporate purposes. We will receive, in aggregate, $1,000 per note issued. The costs of the notes borne by you and described on page 2 comprise the cost of issuing, structuring and hedging the notes.

On or prior to the Trade Date, we hedged our anticipated exposure in connection with the notes, by entering into hedging transactions with our affiliates and/or third party dealers. We expect our hedging counterparties to have taken positions in swaps and futures contracts on the commodity contracts underlying the Underlier. Such purchase activity could have increased the level of the Underlier on the Trade Date, and therefore could have increased the Threshold Level, which is the level at or above which the Underlier must close on the Determination Date so that investors do not suffer a loss on their initial investment in the notes. In addition, through our affiliates, we are likely to modify our hedge position throughout the term of the notes, including on the Determination Date, by purchasing and selling swaps and futures contracts on the commodities underlying the Underlier or positions in any other available securities or instruments that we may wish to use in connection with such hedging activities. As a result, these entities may be unwinding or adjusting hedge positions during the term of the notes, and the hedging strategy may involve greater and more frequent dynamic adjustments to the hedge as the Determination Date approaches. We cannot give any assurance that our hedging activities will not affect the level of the Underlier, and, therefore, adversely affect the value of the notes or the payment you will receive at maturity, if any. For further information on our use of proceeds, see "Use of Proceeds" in the accompanying prospectus.

Benefit Plan Investor Considerations: Each fiduciary of a pension, profit-sharing or other employee benefit plan subject to Title I of the Employee Retirement Income Security Act of 1974, as amended ("ERISA") (a "Plan"), should consider the fiduciary standards of ERISA in the context of the Plan's particular circumstances before authorizing an investment in the notes. Accordingly, among other factors, the fiduciary should consider whether the investment would satisfy the prudence and diversification requirements of ERISA and would be consistent with the documents and instruments governing the Plan.

In addition, we and certain of our affiliates, including MS & Co., may each be considered a "party in interest" within the meaning of ERISA, or a "disqualified person" within the meaning of the Internal Revenue Code of 1986, as amended (the "Code"), with respect to many Plans, as well as many individual retirement accounts and Keogh plans (such accounts and plans, together with other plans, accounts and arrangements subject to Section 4975 of the Code, also "Plans"). ERISA Section 406 and Code Section 4975 generally prohibit transactions between Plans and parties in interest or disqualified persons. Prohibited transactions within the meaning of ERISA or the Code would likely arise, for example, if the notes are acquired by or with the assets of a Plan with respect to which MS & Co. or any of its affiliates is a service provider or other party in interest, unless the notes are acquired pursuant to an exemption from the "prohibited transaction" rules. A violation of these "prohibited transaction" rules could result in an excise tax or other liabilities under ERISA and/or Section 4975 of the Code for those persons, unless exemptive relief is available under an applicable statutory or administrative exemption.

The U.S. Department of Labor has issued five prohibited transaction class exemptions ("PTCEs") that may provide exemptive relief for direct or indirect prohibited transactions resulting from the purchase or holding of the notes. Those class exemptions are PTCE 96-23 (for certain transactions determined by in-house asset managers), PTCE

95-60 (for certain transactions involving insurance company general accounts), PTCE 91-38 (for certain transactions involving bank collective investment funds), PTCE 90-1 (for certain transactions involving insurance company separate accounts) and PTCE 84-14 (for certain transactions determined by independent qualified professional asset managers). In addition, ERISA Section 408(b)(17) and Section 4975(d)(20) of the Code provide an exemption for the purchase and sale of securities and the related lending transactions, provided that neither the Issuer of the notes nor any of its affiliates has or exercises any discretionary authority or control or renders any investment advice with respect to the assets of the Plan involved in the transaction and provided further that the Plan pays no more, and receives no less, than "adequate consideration" in connection with the transaction (the so-called "service provider" exemption). There can be no assurance that any of these class or statutory exemptions will be available with respect to transactions involving the notes.

Because we may be considered a party in interest with respect to many Plans, the notes may not be purchased, held or disposed of by any Plan, any entity whose underlying assets include "plan assets" by reason of any Plan's investment in the entity (a "Plan Asset Entity") or any person investing "plan assets"

of any Plan, unless such purchase, holding or disposition is eligible for exemptive relief, including relief available under PTCEs 96-23, 95-60, 91-38, 90-1, 84-14 or the service provider exemption or such purchase, holding or disposition is otherwise not prohibited. Any purchaser, including any fiduciary purchasing on behalf of a Plan, transferee or holder of the notes will be deemed to have represented, in its corporate and its fiduciary capacity, by its purchase and holding of the notes that either (a) it is not a Plan or a Plan Asset Entity and is not purchasing such notes on behalf of or with "plan assets" of any Plan or with any assets of a governmental, non-U.S. or church plan that is subject to any federal, state, local or non-U.S. law that is substantially similar to the provisions of Section 406 of ERISA or Section 4975 of the Code ("Similar Law") or (b) its purchase, holding and disposition of these notes will not constitute or result in a non-exempt prohibited transaction under Section 406 of ERISA or Section 4975 of the Code or violate any Similar Law.

Due to the complexity of these rules and the penalties that may be imposed upon persons involved in non-exempt prohibited transactions, it is particularly important that fiduciaries or other persons considering purchasing the notes on behalf of or with "plan assets" of any Plan consult with their counsel regarding the availability of exemptive relief.

The notes are contractual financial instruments. The financial exposure provided by the notes is not a substitute or proxy for, and is not intended as a substitute or proxy for, individualized investment management or advice for the benefit of any purchaser or holder of the notes. The notes have not been designed and will not be administered in a manner intended to reflect the individualized needs and objectives of any purchaser or holder of the notes.

Each purchaser or holder of any notes acknowledges and agrees that:

(i) the purchaser or holder or its fiduciary has made and shall make all investment decisions for the purchaser or holder and the purchaser or holder has not relied and shall not rely in any way upon us or our affiliates to act as a fiduciary or adviser of the purchaser or holder with respect to (A) the design and terms of the notes, (B) the purchaser or holder's investment in the notes, or (C) the exercise of or failure to exercise any rights we have under or with respect to the notes;

(ii) we and our affiliates have acted and will act solely for our own account in connection with (A) all transactions relating to the notes and (B) all hedging transactions in connection with our obligations under the notes;

(iii) any and all assets and positions relating to hedging transactions by us or our affiliates are assets and positions of those entities and are not assets and positions held for the benefit of the purchaser or holder;

(iv) our interests are adverse to the interests of the purchaser or holder; and

(v)

neither we nor any of our affiliates is a fiduciary or adviser of the purchaser or holder in connection with any such assets, positions or transactions, and any information that we or any of our affiliates may provide is not intended to be impartial investment advice.

Each purchaser and holder of the notes has exclusive responsibility for ensuring that its purchase, holding and disposition of the notes do not violate the prohibited transaction rules of ERISA or the Code or any Similar Law. The sale of any notes to any Plan or plan subject to Similar Law is in no respect a representation by us or any of our affiliates or representatives that such an investment meets all relevant legal requirements with respect to investments by plans generally or any particular plan, or that such an investment is appropriate for plans generally or any particular plan. In this regard, neither this discussion nor anything provided in this pricing supplement is or is intended to be investment advice directed at any potential Plan purchaser or at Plan purchasers generally and such purchasers of these notes should consult and rely on their own counsel and advisers as to whether an investment in these notes is suitable.

However, individual retirement accounts, individual retirement annuities and Keogh plans, as well as employee benefit plans that permit participants to direct the investment of their accounts, will not be permitted to purchase or hold the notes if the account, plan or annuity is for the benefit of an employee of Morgan Stanley or Morgan Stanley Wealth Management or a family member and the employee receives any compensation (such as, for example, an addition to bonus) based on the purchase of the notes by the account, plan or annuity.

Additional considerations: Client accounts over which Morgan Stanley, Morgan Stanley Wealth Management or any of their respective subsidiaries have investment discretion are not permitted to purchase the notes, either directly or indirectly.

Supplemental information regarding plan of distribution; conflicts of interest: We have agreed to sell to MS & Co., and MS & Co. has agreed to purchase from us, the aggregate face amount of the offered notes specified on the cover of this pricing supplement. MS & Co. proposes initially to offer the notes to an unaffiliated securities dealer at the price to public set forth on the cover of this pricing supplement less a concession not in excess of 0.95% of the face amount. The price to public for notes purchased by certain fee-based advisory accounts is 99.05% of the face amount of the notes, which reduces the agent's commission specified on the cover of this pricing supplement with respect to such notes to 0.00%. MS & Co., the agent for this offering, is our affiliate. Because MS & Co. is both our affiliate and a member of the Financial Industry Regulatory Authority, Inc. ("FINRA"), the underwriting arrangements for this offering must comply with the requirements of FINRA Rule 5121 regarding a FINRA member firm's distribution of the securities of an affiliate and related conflicts of interest. In accordance with FINRA Rule 5121, MS & Co. may not make sales in offerings of the notes to any of its discretionary accounts without the prior written approval of the customer.

MS & Co. is an affiliate of MSFL and a wholly owned subsidiary of Morgan Stanley, and it and other affiliates of ours expect to make a profit by selling, structuring and, when applicable, hedging the notes.

MS & Co. will conduct this offering in compliance with the requirements of FINRA Rule 5121 of the Financial Industry Regulatory Authority, Inc., which is commonly referred to as FINRA, regarding a FINRA member firm's distribution of the notes of an affiliate and related conflicts of interest. MS & Co. or any of our other affiliates may not make sales in this offering to any discretionary account. See "Plan of Distribution (Conflicts of Interest)" in the accompanying prospectus supplement and "Use of Proceeds" in the accompanying prospectus.

Settlement: We expect to deliver the notes against payment for the notes on the Original Issue Date, which will be the fifth scheduled Business Day following the Trade Date. Under Rule 15c6-1 of the Securities Exchange Act of 1934, as amended, trades in the secondary market generally are required to settle in two Business Days, unless the parties to a trade expressly agree otherwise. Accordingly, if the Original Issue Date is more than two Business Days after the Trade Date, purchasers who wish to transact in the notes more than two Business Days prior to the Original Issue Date will be required to specify alternative settlement arrangements to prevent a failed settlement.

Trustee: The Bank of New York Mellon

Calculation Agent: Morgan Stanley Capital Group Inc. ("MSCG") and its successors.

All determinations made by the Calculation Agent will be at the sole discretion of the Calculation Agent and will, in the absence of manifest error, be conclusive for all purposes and binding on you, the Trustee and us.

All calculations with respect to the Cash Settlement Amount, if any, will be rounded to the nearest one hundred-thousandth, with five one-millionths rounded upward (e.g., .876545 would be rounded to .87655); provided that the Calculation Agent will not apply any rounding for the purpose of determining whether the Final Underlier Level is greater than or equal to 85.00% of the Initial Underlier Level; all dollar amounts related to determination of the amount of cash payable per note, if any, will be rounded to the nearest ten-thousandth, with five one hundred-thousandths rounded upward (e.g., .76545 would be rounded up to .7655); and all dollar amounts paid on the aggregate number of notes, if any, will be rounded to the nearest cent, with one-half cent rounded upward.

Because the Calculation Agent is our affiliate, the economic interests of the Calculation Agent and its affiliates may be adverse to your interests as an investor in the notes, including with respect to certain determinations and judgments that the Calculation Agent must make in determining the Initial Underlier Level, the Final Underlier Level, the Underlier Return and whether a Market Disruption Event has occurred. See “Discontinuance of the Underlier; alteration of method of calculation.” The Calculation Agent is obligated to carry out its duties and functions in good faith and using its reasonable judgment.

CUSIP no.: 61766YDN8

ISIN: US61766YDN85

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HYPOTHETICAL EXAMPLES

The following table and chart are provided for purposes of illustration only. They should not be taken as an indication or prediction of future investment results and are intended merely to illustrate the impact that the various hypothetical Closing Levels of the Underlier on the Determination Date could have on the Cash Settlement Amount.

The examples below are based on a range of Final Underlier Levels that are entirely hypothetical; no one can predict what the level of the Underlier will be on any day during the term of the notes, and no one can predict what the Final Underlier Level will be on the Determination Date. The Underlier has at times experienced periods of high volatility — meaning that the level of the Underlier has changed considerably in relatively short periods — and its performance cannot be predicted for any future period.

The information in the following examples reflects hypothetical rates of return on the notes assuming that they are purchased on the Original Issue Date at the Face Amount and held to the Stated Maturity Date. The value of the notes at any time after the Trade Date will vary based on many economic and market factors, including interest rates, the volatility of the Underlier, our creditworthiness and changes in market conditions, and cannot be predicted with accuracy. Any sale prior to the Stated Maturity Date could result in a substantial loss to you.

Key Terms and Assumptions	
Face Amount:	$1,000
Maximum Settlement Amount:	$1,185.50 per $1,000 Face Amount of notes (118.550% of the Face Amount)
Minimum Cash Settlement Amount:	None
Threshold Level:	85% of the Initial Underlier Level
Buffer Rate:	Approximately 117.65%
Threshold Amount:	15.00%

· *Neither a Market Disruption Event nor a non-Underlier Business Day occurs on the Determination Date.*

· *No discontinuation of the Underlier or alteration of the method by which the Underlier is calculated.*

· *Notes purchased on the Original Issue Date at the Face Amount and held to the Stated Maturity Date.*

The actual performance of the Underlier over the term of the notes, as well as the Cash Settlement Amount, if any, may bear little relation to the hypothetical examples shown below or to the historical levels of the Underlier shown elsewhere in this document. For information about the historical levels of the Underlier during recent periods, see “The Underlier” below.

The levels in the left column of the table below represent hypothetical Final Underlier Levels and are expressed as percentages of the Initial Underlier Level. The amounts in the right column represent the hypothetical Cash Settlement

Amount, based on the corresponding hypothetical Final Underlier Level (expressed as a percentage of the Initial Underlier Level), and are expressed as percentages of the Face Amount of notes (rounded to the nearest one-thousandth of a percent). Thus, a hypothetical Cash Settlement Amount of 100% means that the value of the cash payment that we would deliver for each $1,000 Face Amount of notes on the Stated Maturity Date would equal 100% of the Face Amount of notes, based on the corresponding hypothetical Final Underlier Level (expressed as a percentage of the Initial Underlier Level) and the assumptions noted above. The numbers appearing in the table and chart below may have been rounded for ease of analysis.

Hypothetical Final Underlier Level (as Percentage of Initial Underlier Level)	**Hypothetical Cash Settlement Amount (as Percentage of Face Amount)**
200.000%	118.550%
175.000%	118.550%
150.000%	118.550%
125.000%	118.550%
120.000%	118.550%
115.000%	118.550%
110.000%	118.550%
105.000%	118.550%
100.000%	118.550%
95.000%	118.550%
90.000%	118.550%
85.000%	**118.550%**
80.000%	94.118%
75.000%	88.235%
50.000%	58.824%
25.000%	29.412%
0.000%	**0.000%**

If, for example, the Final Underlier Level were determined to be 25.000% of the Initial Underlier Level, the Cash Settlement Amount would be approximately 29.412% of the Face Amount of notes, as shown in the table above. As a result, if you purchased your notes on the Original Issue Date at the Face Amount and held them to the Stated Maturity Date, you would lose approximately 70.588% of your investment. If you purchased your notes at a premium to the Face Amount, you would lose a correspondingly higher percentage of your investment.

If the Final Underlier Level were determined to be 150.000% of the Initial Underlier Level, the Cash Settlement Amount would be capped at the Maximum Settlement Amount (expressed as a percentage of the Face Amount), or 118.550% of each $1,000 Face Amount of notes, as shown in the table above. As a result, if you purchased the notes on the Original Issue Date at the Face Amount and held them to the Stated Maturity Date, you would not benefit from any increase in the Final Underlier Level above 85.000% of the Initial Underlier Level.

Payoff Diagram

The following chart shows a graphical illustration of the hypothetical Cash Settlement Amount (expressed as a percentage of the Face Amount of notes), if the Final Underlier Level (expressed as a percentage of the Initial Underlier Level) were any of the hypothetical levels shown on the horizontal axis. The chart shows that any hypothetical Final Underlier Level (expressed as a percentage of the Initial Underlier Level) of less than the Threshold Level of 85% (the section left of the 85% marker on the horizontal axis) would result in a hypothetical Cash Settlement Amount of less than 100% of the Face Amount of notes (the section below the 100% marker on the vertical axis), and, accordingly, in a loss of principal to the holder of the notes. The chart also shows that any hypothetical Final Underlier Level (expressed as a percentage of the Initial Underlier Level) of greater than or equal to 85% (the section right of the 85% marker on the horizontal axis) would result in a capped return on your investment and a Cash Settlement Amount equal to the Maximum Settlement Amount.

Hypothetical Payoff Diagram

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RISK FACTORS

The following is a non-exhaustive list of certain key risk factors for investors in the notes. For further discussion of these and other risks, you should read the section entitled "Risk Factors" in the accompanying prospectus. We also urge you to consult your investment, legal, tax, accounting and other advisers in connection with your investment in the notes.

The Notes Do Not Pay Interest Or Guarantee The Return Of Any Of Your Principal

The terms of the notes differ from those of ordinary debt securities in that the notes do not pay interest and do not guarantee any return of principal at maturity. If the Final Underlier Level has declined by an amount greater than the Threshold Amount of 15% from the Initial Underlier Level, you will receive for each note that you hold a Cash Settlement Amount that is less than the Face Amount of each note by an amount proportionate to the decline in the level of the Underlier below the Threshold Level of 85% of the Initial Underlier Level times the Buffer Rate of approximately 117.65%. As there is no minimum Cash Settlement Amount on the notes, you could lose your entire initial investment.

Also, the market price of your notes prior to the Stated Maturity Date may be significantly lower than the purchase price you pay for your notes. Consequently, if you sell your notes before the Stated Maturity Date, you may receive significantly less than the amount of your investment in the notes.

The Appreciation Potential Of The Notes Is Limited By The Maximum Settlement Amount

The appreciation potential of the notes is limited by the Maximum Settlement Amount of $1,185.50 per note, or 118.55% of the Face Amount. Because the Cash Settlement Amount will be limited to 118.55% of the Face Amount for the notes, any increase in the Final Underlier Level over the Threshold Level will not increase the return on the notes, even if the Final Underlier Level is significantly greater than the Initial Underlier Level.

An Investment In The Notes Will Expose You To Concentrated Risks Relating To Crude Oil

The Underlier is composed entirely of crude oil futures contracts included in the S&P GSCI™ Index — Excess Return ("S&P GSCI™—ER"). An investment in the notes may therefore bear risks similar to a securities investment concentrated in a single underlying sector. The price of crude oil futures is primarily affected by the global demand for and supply of crude oil, but is also influenced significantly from time to time by speculative actions and by currency exchange rates. Demand for refined petroleum products by consumers, as well as the agricultural, manufacturing and transportation industries, affects the price of crude oil. Crude oil's end-use as a refined product is often as transport

fuel, industrial fuel and in-home heating fuel. Potential for substitution in most areas exists, although considerations including relative cost often limit substitution levels. Because the precursors of demand for petroleum products are linked to economic activity, demand will tend to reflect economic conditions. Demand is also influenced by government regulations, such as environmental or consumption policies. In addition to general economic activity and demand, prices for crude oil are affected by political events, labor activity, developments in production technology such as fracking and, in particular, direct government intervention (such as embargos) or supply disruptions in major oil producing regions of the world. Such events tend to affect oil prices worldwide, regardless of the location of the event. Supply for crude oil may increase or decrease depending on many factors. These include production decisions by the Organization of the Petroleum Exporting Countries (OPEC) and other crude oil producers. In the event of sudden disruptions in the supplies of oil, such as those caused by war, natural events, accidents or acts of terrorism, prices of oil futures contracts could become extremely volatile and unpredictable. Also, sudden and dramatic changes in the futures market may occur, for example, upon a cessation of hostilities that may exist in countries producing oil, the introduction of new or previously withheld supplies into the market or the introduction of substitute products or commodities. The price of crude oil futures has experienced very severe price fluctuations over the recent past and there can be no assurance that this extreme price volatility will not continue in the future.

Investments Linked To Commodities Are Subject To Sharp Fluctuations In Commodity Prices

Investments linked to the prices of commodities are subject to sharp fluctuations in the prices of commodities and related contracts over short periods of time for a variety of factors, including: changes in supply and demand relationships; weather; climatic events; the occurrence of natural disasters; wars; political and civil upheavals; acts of terrorism; trade, fiscal, monetary, and exchange control programs; domestic and foreign political and economic events and policies; disease; pestilence; technological developments; changes in interest rates; and trading activities in commodities and related contracts. These factors may affect the settlement price of the Underlier and the value of your notes in varying and potentially inconsistent ways. As a result of these or other factors, the level of the Underlier may be, and has recently been, volatile. See "The Underlier" below.

Single Commodity Prices Tend To Be More Volatile Than, And May Not Correlate With, The Prices Of Commodities Generally

The Cash Settlement Amount, if any, is linked exclusively to a single-commodity index composed entirely of crude oil futures contracts and not to a diverse basket of commodities or a broad-based commodity index. The price of crude oil futures contracts may not correlate to, and may diverge significantly from, the prices of commodities generally. Because the notes are linked to a single-commodity index, they carry greater risk and may be more volatile than a security linked to the prices of multiple commodities or a broad-based commodity index. The Underlier may be highly volatile, and we can give you no assurance that the volatility will lessen.

Higher Future Prices Of The Underlier Commodity Relative To Its Current Prices May Adversely Affect The Value Of The Underlier And The Value Of The Notes

The S&P GSCI™–ER, on which the Underlier is based, is composed of futures contracts on physical commodities. Unlike equities, which typically entitle the holder to a continuing stake in a corporation, commodity futures contracts normally specify a certain date for delivery of the underlying physical commodity. As the futures contracts that compose the Underlier approach expiration, they are replaced by contracts that have a later expiration. Thus, for example, a contract purchased and held in September may specify an October expiration. As time passes, the contract expiring in October is replaced by a contract for delivery in November. This process is referred to as "rolling." If the market for these contracts is (putting aside other considerations) in "backwardation," where the prices are lower in the distant delivery months than in the nearer delivery months, the sale of the October contract would take place at a price that is higher than the price of the November contract, thereby creating a "roll yield." However, crude oil and certain other commodities included in the S&P GSCI™–ER have historically traded in "contango" markets. Contango markets are those in which the prices of contracts are higher in the distant delivery months than in the nearer delivery months. The presence of contango and absence of backwardation in the crude oil markets generally results in negative "roll yields," which would adversely affect the value of the Underlier, and, accordingly, the value of the notes.

An Investment Linked To Commodity Futures Contracts Is Not Equivalent To An Investment Linked To The Spot Prices Of Physical Commodities

The Underlier has returns based on the change in price of futures contracts included in such Underlier, not the change in the spot price of the actual physical commodity to which such futures contracts relate. The price of a futures contract reflects the expected value of the commodity upon delivery in the future, whereas the price of a physical commodity reflects the value of such commodity upon immediate delivery, which is referred to as the spot price. Several factors can result in differences between the price of a commodity futures contract and the spot price of a commodity, including the cost of storing such commodity for the length of the futures contract, interest costs related to financing the purchase of such commodity and expectations of supply and demand for such commodity. While the changes in the price of a futures contract are usually correlated with the changes in the spot price, such correlation is not exact. In some cases, the performance of a commodity futures contract can deviate significantly from the spot price performance of the related underlying commodity, especially over longer periods of time. Accordingly, investments linked to the return of commodities futures contracts may underperform similar investments that reflect the spot price return on physical commodities.

The Return on Your Notes Will Be Based on an Underlier That Reflects Excess Return or Price Return, Not Total Return

The return on your notes is based on the performance of the S&P GSCI™ Crude Oil Index-Excess Return. As discussed below, the S&P GSCI™ Crude Oil Index-Excess Return reflects the returns that are potentially available through an unleveraged investment in the Underlier Contract. It is not, however, linked to a "total return" index or strategy, which, in addition to reflecting those returns, would also reflect interest that could be earned on funds committed to the trading of the Underlier Contract. The Underlier and, therefore, the return on your notes will not include such a total return feature or interest component.

Legal And Regulatory Changes Could Adversely Affect The Return On And Value Of The Notes

Futures contracts and options on futures contracts, including those related to crude oil, are subject to extensive statutes, regulations, and margin requirements. The Commodity Futures Trading Commission, commonly referred to as the "CFTC," and the exchanges on which such futures contracts trade, are authorized to take extraordinary actions in the event of a market emergency, including, for example, the retroactive implementation of speculative position limits or higher margin requirements, the establishment of daily limits and the suspension of trading. Furthermore, certain exchanges have regulations that limit the amount of fluctuations in futures contract prices that may occur during a single five-minute trading period. These limits could adversely affect the market prices of relevant futures and options contracts and forward contracts. The regulation of commodity transactions in the U.S. is subject to ongoing modification by government and judicial action. In addition, various non-U.S. governments have expressed concern regarding the disruptive effects of speculative trading in the commodity markets and the need to regulate the derivative markets in general. The effect on the value of the notes of any future regulatory change is impossible to predict, but could be substantial and adverse to the interests of holders of the notes

For example, the Dodd-Frank Act, which was enacted on July 21, 2010, requires the CFTC to establish limits on the amount of positions that may be held by any person in certain commodity futures contracts and swaps, futures and options that are economically equivalent to such contracts. While the effects of these or other regulatory developments are difficult to predict, when adopted, such rules may have the effect of making the markets for commodities, commodity futures contracts, options on futures contracts and other related derivatives more volatile and over time potentially less liquid. Such restrictions may force market participants, including us and our affiliates, or such market participants may decide, to sell their positions in such futures contracts and other instruments subject to the limits. If this broad market selling were to occur, it would likely lead to declines, possibly significant declines, in commodity prices, in the price of such commodity futures contracts or instruments and potentially, the value of the notes.

Suspensions Or Disruptions Of Market Trading In Commodity And Related Futures Markets Could Adversely Affect The Price Of The Notes

The commodity markets are subject to temporary distortions or other disruptions due to various factors, including the lack of liquidity in the markets, the participation of speculators and government regulation and intervention. In addition, U.S. futures exchanges and some foreign exchanges have regulations that limit the amount of fluctuation in futures contract prices which may occur during a single business day. These limits are generally referred to as "daily price fluctuation limits" and the maximum or minimum price of a contract on any given day as a result of these limits is referred to as a "limit price." Once the limit price has been reached in a particular contract, no trades may be made at a different price. Limit prices have the effect of precluding trading in a particular contract or forcing the liquidation of contracts at disadvantageous times or prices. These circumstances could adversely affect the value of the Underlier, and, therefore, the value of the notes.

The Underlier May In The Future Include Contracts That Are Not Traded On Regulated Futures Exchanges

The Underlier was originally based solely on futures contracts traded on regulated futures exchanges (referred to in the United States as "designated contract markets"). At present, the Underlier continues to be composed exclusively of regulated futures contracts. However, the Underlier may in the future include over-the-counter contracts (such as swaps and forward contracts) traded on trading facilities that are

subject to lesser degrees of regulation or, in some cases, no substantive regulation. As a result, trading in such contracts, and the manner in which prices and volumes are reported by the relevant trading facilities, may not be subject to the same provisions of, and the protections afforded by, the Commodity Exchange Act of 1936, as amended, or other applicable statutes and related regulations, that govern trading on regulated futures exchanges. In addition, many electronic trading facilities have only recently initiated trading and do not have significant trading histories. As a result, the trading of contracts on such facilities and the inclusion of such contracts in the indices may be subject to certain risks not presented by most exchange-traded futures contracts, including risks related to the liquidity and price histories of the relevant contracts. The termination or replacement of any designated contract may have an adverse impact on the value of the Underlier.

If You Purchase Your Notes At A Premium To The Face Amount, The Return On Your Investment Will Be Lower Than The Return On Notes Purchased At The Face Amount, And The Impact Of Certain Key Terms Of The Notes Will Be Negatively Affected

The Cash Settlement Amount will not be adjusted based on the issue price you pay for the notes. If you purchase notes at a price that differs from the Face Amount of notes, then the return on your investment in such notes held to the Stated Maturity Date will differ from, and may be substantially less than, the return on notes purchased at the Face Amount. If you purchase your notes at a premium to the Face Amount and hold them to the Stated Maturity Date, the return on your investment in the notes will be lower than it would have been had you purchased the notes at the Face Amount or at a discount to the Face Amount. In addition, the impact of the Threshold Level and the Maximum Settlement Amount on the return on your investment will depend upon the price you pay for your notes relative to the Face Amount. For example, if you purchase your notes at a premium to the Face Amount, the Threshold Level will not offer the same measure of protection to your investment as would have been the case for notes purchased at the Face Amount or at a discount to the Face Amount. Additionally, the Cash Settlement Amount will be limited to the Maximum Settlement Amount, which would represent a lower percentage return relative to your initial investment than it would have been had you purchased the notes at the Face Amount.

The Market Price Will Be Influenced By Many Unpredictable Factors

Several factors, many of which are beyond our control, will influence the value of the notes in the secondary market and the price at which MS & Co. may be willing to purchase or sell the notes in the secondary market, including: the level of the Underlier at any time, the volatility (frequency and magnitude of changes in value) of the Underlier, the market prices of the futures contracts underlying the Underlier, and the volatility of such prices, trends of supply and demand for the futures contracts underlying the Underlier at any time, interest and yield rates in the market, time remaining to maturity, geopolitical conditions and economic, financial, political and regulatory or judicial events that affect the futures contracts underlying the Underlier or commodities generally and which may affect the Final Underlier Level of the Underlier and any actual or anticipated changes in our credit ratings or credit spreads. The level of the Underlier may be, and has been, volatile, and we can give you no assurance that the volatility will lessen. See “The Underlier” below. You may receive less, and possibly significantly less, than the Face Amount per note if you try to sell your notes prior to maturity.

The Notes Are Subject To Our Credit Risk, And Any Actual Or Anticipated Changes To Our Credit Ratings Or Credit Spreads May Adversely Affect The Market Value Of The Notes

You are dependent on our ability to pay all amounts due on the notes at maturity, and therefore you are subject to our credit risk. If we default on our obligations under the notes, your investment would be at risk and you could lose some or all of your investment. As a result, the market value of the notes prior to maturity will be affected by changes in the market's view of our creditworthiness. Any actual or anticipated decline in our credit ratings or increase in the credit spreads charged by the market for taking our credit risk is likely to adversely affect the market value of the notes.

As A Finance Subsidiary, MSFL Has No Independent Operations And Will Have No Independent Assets

As a finance subsidiary, MSFL has no independent operations beyond the issuance and administration of its securities and will have no independent assets available for distributions to holders of the notes if they make claims in respect of such notes in a bankruptcy, resolution or similar proceeding. Accordingly, any

recoveries by such holders will be limited to those available under the related guarantee by Morgan Stanley and that guarantee will rank *pari passu* with all other unsecured, unsubordinated obligations of Morgan Stanley. Holders will have recourse only to a single claim against Morgan Stanley and its assets under the guarantee. Holders of the notes should accordingly assume that in any such proceedings they could not have any priority over and should be treated *pari passu* with the claims of other unsecured, unsubordinated creditors of Morgan Stanley, including holders of Morgan Stanley-issued securities.

Investing In The Notes Is Not Equivalent To Investing In The Underlier

Investing in the notes is not equivalent to investing in the Underlier or the futures contracts that underlie the Underlier. By purchasing the notes, you do not purchase any entitlement to crude oil or futures contracts or forward contracts on the Underlier or on crude oil. Further, by purchasing the notes, you are taking our credit risk and not are not taking credit risk with respect to any counterparty to futures contracts or forward contracts on the Underlier or crude oil.

Adjustments To The Underlier Could Adversely Affect The Value Of The Notes

The publisher of the Underlier may add, delete or substitute the commodity contracts constituting the Underlier or make other methodological changes that could change the level of the Underlier. The publisher of the Underlier may discontinue or suspend calculation or publication of the Underlier at any time. Any of these actions could adversely affect the value of the notes. Where the Underlier is discontinued, the Calculation Agent will have the sole discretion to substitute a successor underlier that is comparable to the Underlier and will be permitted to consider indices that are calculated and published by the Calculation Agent or any of its affiliates.

The Amount Payable On The Notes Is Not Linked To The Level Of The Underlier At Any Time Other Than The Determination Date

The Final Underlier Level will be based on the Closing Level on the Determination Date, subject to adjustment for non-Trading Days and certain Market Disruption Events. Even if the level of the Underlier appreciates prior to the Determination Date but then drops by the Determination Date, the Cash Settlement Amount may be less, and may be significantly less, than it would have been had the Cash Settlement Amount been linked to the level of the Underlier prior to such drop. Although the actual level of the Underlier on the Stated Maturity Date or at other times during the term of the notes may be higher than the Final Underlier Level, the Cash Settlement Amount will be based solely on the Closing Level on the Determination Date.

The Rate We Are Willing To Pay For Securities Of This Type, Maturity And IsIntrexon provides that Intrexon may terminate such agreement if we do not perform certain specified requirements, including developing therapies considered superior.

We can give no assurances that any of our issued patents licensed to us or any of our other patent applications will provide us with significant proprietary protection or be of commercial benefit to us. Furthermore, the issuance of a patent is not conclusive as to its validity or enforceability, nor does the issuance of a patent provide the patent holder with freedom to operate without infringing the patent rights of others.

We will incur additional expenses in connection with our exclusive channel collaboration arrangement with Intrexon.

Pursuant to our exclusive channel collaboration with Intrexon, we are responsible for future research and development expenses of product candidates developed under such collaboration, the effect of which we expect will increase the level of our overall research and development expenses going forward. Although all manufacturing, preclinical studies and human clinical trials are expensive and difficult to design and implement, costs associated with the manufacturing, research and development of biologic product candidates are generally greater in comparison to small molecule product candidates. We have added additional personnel and expect to add additional personnel to support our exclusive channel collaboration with Intrexon.

Because our collaboration with Intrexon is relatively new, we have only recently assumed development responsibility and costs associated with such program. In addition, because development activities are determined pursuant to a joint steering committee comprised of Intrexon and ourselves and we have limited experience, future development costs associated this program may be difficult to anticipate and exceed our expectations. Our actual cash requirements may vary materially from our current expectations for a number of other factors that may include, but are not limited to, unanticipated technical challenges, changes in the focus and direction of our development activities or adjustments necessitated by changes in the competitive landscape in which we operate. If we are unable to continue to financially support such collaboration due to our own working capital constraints, we may be forced to delay our activities. If we are unable to obtain additional financing on terms acceptable to us or at all, we may be forced to seek licensing partners or discontinue development.

Developments by competitors may render our products or technologies obsolete or non-competitive.

Companies that currently sell or are developing both generic and proprietary products to treat serious diseases include: Actelion Pharmaceuticals, Bayer Health Care, Biogen Idec, Eli Lilly & Co., Genzyme, GlaxoSmithKline Pharmaceuticals, Merck & Co., Pfizer, Novartis, Teva Pharmaceuticals and United Therapeutics. Many of our competitors have significant financial and human resources. The pulmonary arterial hypertension market is highly competitive and several different product classes currently compete in this space, including prostacyclin-based therapies, endothelin receptor antagonists and phosphodiesterase type 5 inhibitors. Prostacyclin-based therapies for

PAH are available in a number of delivery formats, including intravenous, subcutaneous and inhaled routes and an oral prostacyclin-based product candidate is currently under NDA review in the U.S. In addition, academic research centers may develop technologies that compete with our Trimesta, sustained-release zinc preparation - AEN-100, and flupirtine technologies. Should clinicians or regulatory authorities view these therapeutic regiments as more effective than our products, this might delay or prevent us from obtaining regulatory approval for our products, or it might prevent us from obtaining favorable reimbursement rates from payers, such as Medicare, Medicaid and private insurers.

We operate in a highly competitive environment.

The pharmaceutical and biotechnology industries are characterized by rapidly evolving technology and intense competition. Our competitors include major multi-national pharmaceutical companies and biotechnology companies developing both generic and proprietary therapies to treat serious diseases. Many of these companies are well-established and possess technical, human, research and development, financial, and sales and marketing resources significantly greater than ours. In addition, many of our potential competitors have formed strategic collaborations, partnerships and other types of joint ventures with larger, well established industry competitors that afford these companies potential research and development and commercialization advantages in the therapeutic areas we are currently pursuing.

Academic research centers, governmental agencies and other public and private research organizations are also conducting and financing research activities which may produce products directly competitive to those being developed by us. In addition, many of these competitors may be able to obtain patent protection, obtain FDA and other regulatory approvals and begin commercial sales of their products before us.

Competitors could develop and/or gain FDA approval of our products for a different indication.

Since we do not have composition of matter patent claims for flupirtine, estriol or zinc acetate, others may obtain approvals for other uses of these products that are not covered by our issued or pending patents. For example, the active ingredients in both Effirma (flurpirtine) and Trimesta (estriol) have been approved for marketing in overseas countries for different uses and an oral immediate release form of zinc is approved in the U.S. and Europe for the treatment of Wilson's disease. Other companies, including the original developers or licensees or affiliates may seek to develop Effirma or Trimesta or their respective active ingredient(s) for other uses in the U.S. or any country we are seeking approval for. We cannot provide any assurances that any other company may obtain FDA approval for products that contain flupirtine, estriol or zinc in various formulations or delivery systems that might adversely affect our ability or the ability of Meda to develop and market these products in the U.S. We are aware that other companies have intellectual property protection using the active ingredients and have conducted clinical trials of flupirtine, estriol and zinc for different applications than what we are developing. Many of these companies may have more resources than us. We cannot provide any assurances that our products will be FDA-approved prior to our competitors.

If a product containing our active ingredients is already marketed or if the FDA approves other products containing our active ingredients in the future to treat indications, physicians may elect to prescribe and substitute a competitor's products to treat the diseases for which we are intending to commercialize; this is commonly referred to as "off-label" use. While under FDA regulations a competitor is not allowed to promote off-label uses of its product, the FDA does not regulate the practice of medicine and, as a result, cannot direct physicians to select certain products for their patients. Consequently, we might be limited in our ability to prevent off-label use of a competitor's product to treat the

diseases we are intending to commercialize, even if we have issued method of use patents for that indication. If we are not able to obtain and enforce our patents, if any, or otherwise receive orphan drug protection in the case of ALS, a competitor could develop and commercialize similar products for the same indications that we are pursuing. We cannot provide any assurances that a competitor will not obtain FDA approval for a product that contains the same active ingredients as our products.

We rely on method patents and patent applications and various regulatory exclusivities to protect some of our product candidates and our ability to compete may be limited or eliminated if we are not able to protect our products.

Our competitiveness may be adversely affected if we are unable to protect our proprietary technologies. We do not have composition of matter patents for Trimesta or Effirma, or their respective active ingredients estriol and flupirtine. We rely on issued patent and pending patent applications for use of Trimesta to treat MS (issued U.S. Patent No. 6,936,599) and various other therapeutic indications, which have been exclusively licensed to us. We have exclusively licensed an issued patent for the treatment of fibromyalgia with flupirtine, which we have sublicensed to Meda AB.

Our AEN-100 drug candidate (gastroretentive zinc acetate) is the subject of U.S. and international pending patent applications, such as published U.S. patent application Ser. No. 11/621,962 and corresponding international applications that claim priority to January 10, 2006 as well as additional patent applications. On October 26, 2011, we received a final rejection letter with regard to U.S. patent application Ser. No. 11/621,962. On February 15, 2012, we filed a Request for Continued Examination.

The patent positions of pharmaceutical companies are uncertain and may involve complex legal and factual questions. We may incur significant expense in protecting our intellectual property and defending or assessing claims with respect to intellectual property owned by others. Any patent or other infringement litigation by or against us could cause us to incur significant expense and divert the attention of our management.

Others may file patent applications or obtain patents on similar technologies or compounds that compete with our products. We cannot predict how broad the claims in any such patents or applications will be, and whether they will be allowed. Once claims have been issued, we cannot predict how they will be construed or enforced. We may infringe intellectual property rights of others without being aware of it. If another party claims we are infringing their technology, we could have to defend an expensive and time consuming lawsuit, pay a large sum if we are found to be infringing, or be prohibited from selling or licensing our products unless we obtain a license or redesign our product, which may not be possible.

We also rely on trade secrets and proprietary know-how to develop and maintain our competitive position. Some of our current or former employees, consultants, scientific advisors, current or prospective corporate collaborators, may unintentionally or willfully disclose our confidential information to competitors or use our proprietary technology for their own benefit. Furthermore, enforcing a claim alleging the infringement of our trade secrets would be expensive and difficult to prove, making the outcome uncertain. Our competitors may also independently develop similar knowledge, methods, and know-how or gain access to our proprietary information through some other means.

We may fail to retain or recruit necessary personnel, and we may be unable to secure the services of consultants.

As of March 26, 2012, we had eight employees. We have also engaged regulatory consultants to advise us on our dealings with the FDA and other foreign regulatory authorities and have been and will be required to retain additional consultants and employees in order to fulfill our obligations under our exclusive channel collaboration with Intrexon. Our future performance will depend in part on our ability to successfully integrate newly hired officers into our management team and our ability to develop an effective working relationship among senior management.

Certain of our directors Jeffrey Kraws, James S. Kuo, Nelson K. Stacks, Scott L. Tarriff, and Jeffrey Wolf, scientific advisors, and consultants serve as officers, directors, scientific advisors, or consultants of other biopharmaceutical or biotechnology companies that might be developing competitive products to ours. Other than corporate opportunities, none of our directors are obligated under any agreement or understanding with us to make any additional products or technologies available to us. Similarly, we can give no assurances, and we do not expect and stockholders should not expect, that any biomedical or pharmaceutical product or technology identified by any of our directors or affiliates in the future would be made available to us other than corporate opportunities. We can give no assurances that any such other companies will not have interests that are in conflict with our interests.

Losing key personnel or failing to recruit necessary additional personnel would impede our ability to attain our development objectives. There is intense competition for qualified personnel in the drug-development field, and we may not be able to attract and retain the qualified personnel we would need to develop our business.

We rely on independent organizations, advisors, and consultants to perform certain services for us, including handling substantially all aspects of regulatory approval, clinical management, manufacturing, marketing, and sales. We expect that this will continue to be the case. Such services may not always be available to us on a timely basis when we need them.

If the parties we depend on for supplying our drug substance raw materials and certain manufacturing-related services do not timely supply these products and services, it may delay or impair our ability to develop, manufacture and market our products.

We rely on suppliers for our drug substance raw materials and third parties for certain manufacturing-related services to produce material that meets appropriate content, quality and stability standards and use in clinical trials of our products and, after approval, for commercial distribution. Our AEN-100 product candidate has limited stability data to date and is the subject of ongoing stability studies. To succeed, clinical trials require adequate supplies of drug substance and drug product, which may be difficult or uneconomical to procure or manufacture. We and our suppliers and vendors may not be able to (i) produce our drug substance or drug product to appropriate standards for use in clinical studies, (ii) perform under any definitive manufacturing, supply or service agreements with us or (iii) remain in business for a sufficient time to successfully produce and market our product candidates. If we do not maintain important manufacturing and service relationships, we may fail to find a replacement supplier or required vendor or develop our own manufacturing capabilities which could delay or impair our ability to obtain regulatory approval for our products and substantially increase our costs or deplete profit margins, if any. If we do find replacement manufacturers and vendors, we may not be able to enter into agreements with them on terms and conditions favorable to us and, there could be a substantial delay before a new facility could be qualified and registered with the FDA and foreign regulatory authorities.

If successful large-scale manufacturing of DNA-based products is not possible, we or our collaborators may be unable to manufacture enough of our product candidates to achieve regulatory approval or market our DNA-based products.

Few companies to date have demonstrated successful large-scale manufacturing of DNA-based products, including those that have had significantly more resources than us and it is anticipated that significant challenges will be faced in the scale-up of our manufacturing process for commercial production. There are a limited number of contract manufacturers qualified to perform large-scale manufacturing of DNA-based products. We or our collaborators may be unable to manufacture commercial-scale quantities of DNA-based products or receive appropriate government approvals on a timely basis or at all. Failure to successfully manufacture or obtain appropriate government approvals on a timely basis or at all would prevent us from achieving our business objectives.

Clinical trials are very expensive, time-consuming, and difficult to design and implement.

Human clinical trials are very expensive and difficult to design and implement, in part because they are subject to rigorous regulatory requirements. The clinical trial process is also time-consuming. We estimate that clinical trials of our product candidates would take at least several years to complete. Furthermore, failure can occur at any stage of the trials, and we could encounter problems that cause us to abandon or repeat clinical trials. Commencement and completion of clinical trials may be delayed by several factors, including:

- obtaining an IND application with the FDA to commence clinical trials;
- identification of, and acceptable arrangements with, one or more clinical sites;
- obtaining IRB approval to commence clinical trials;
- unforeseen safety issues;
- determination of dosing;
- lack of effectiveness during clinical trials;
- slower than expected rates of patient recruitment;
- inability to monitor patients adequately during or after treatment;
- inability or unwillingness of medical investigators to follow our clinical protocols; and
- unwillingness of the FDA or IRBs to permit the clinical trials to be initiated.

In addition, we, IRBs or the FDA may suspend our clinical trials at any time if it appears that we are exposing participants to unacceptable health risks or if IRBs or the FDA finds deficiencies in our submissions or conduct of our trials.

The results of our clinical trials may not support our product candidate claims and the results of preclinical studies and completed clinical trials are not necessarily predictive of future results.

To date, long-term safety and efficacy have not yet been demonstrated in clinical trials for any of our diagnostic product candidates. Favorable results in our early studies or trials may not be repeated in later studies or trials. Even if

our clinical trials are initiated and completed as planned, we cannot be certain that the results will support our product candidate claims. Success in preclinical testing and Phase II clinical trials does not ensure that later Phase II or Phase III clinical trials will be successful. We cannot be sure that the results of later clinical trials would replicate the results of prior clinical trials and preclinical testing. In particular, the limited results that we have obtained for our diagnostic tests may not predict results from studies in larger numbers of subjects drawn from more diverse populations over a longer period of time. Clinical trials may fail to demonstrate that our product candidates are safe for humans and effective for indicated uses. Any such failure could cause us or our sublicensee to abandon a product candidate and might delay development of other product candidates. Preclinical and clinical results are frequently susceptible to varying interpretations that may delay, limit or prevent regulatory approvals or commercialization. Any delay in, or termination of, our clinical trials would delay our obtaining FDA approval for the affected product candidate and, ultimately, our ability to commercialize that product candidate.

We depend on third parties, including researchers and sublicensees, who are not under our control.

Since we have in-licensed some of our product candidates, have sublicensed a product candidate and have a collaboration agreement for the development of another product candidate, we depend upon our sublicensee and independent investigators and scientific collaborators, such as universities and medical institutions or private physician scientists, to conduct our preclinical and clinical trials under agreements with us. These collaborators are not our employees and we cannot control the amount or timing of resources that they devote to our programs or the timing of their procurement of clinical-trial data or their compliance with applicable regulatory guidelines. Should any of these scientific inventors/advisors or those of our sublicensee become disabled or die unexpectedly, or should they fail to comply with applicable regulatory guidelines, we or our sublicensee may be forced to scale back or terminate development of that program. They may not assign as great a priority to our programs or pursue them as diligently as we would if we were undertaking those programs ourselves. Failing to devote sufficient time and resources to our drug-development programs, or substandard performance and failure to comply with regulatory guidelines, could result in delay of any FDA applications and our commercialization of the drug candidate involved.

These collaborators may also have relationships with other commercial entities, some of which may compete with us. Our collaborators assisting our competitors at our expense could harm our competitive position. For example, we are highly dependent on scientific collaborators for our Trimesta development program. Specifically, all of the clinical trials have been conducted under physician-sponsored IND applications, not corporate-sponsored INDs. Generally, we have experienced difficulty in collecting data generated from these physician-sponsored clinical trials for our programs. We cannot provide any assurances that we will not experience any additional delays in the future.

We are also highly dependent on government and private grants to fund certain of our clinical trials for our product candidates. For example, Trimesta (estriol) has received grants totaling over $8 million, predominantly from the Southern California Chapter of the NMSS and the National Institutes of Health which funds a majority of the ongoing clinical trial in relapsing-remitting MS for women. Although we believe that the grant funding received to date is sufficient to complete the current clinical trial based upon current cost estimates, if we experience any additional unanticipated costs or require further clinical trials, and our scientific collaborator is unable to maintain or receive additional grants, we might be forced to scale back or terminate the development of this product candidate. We will also need to cross reference our IND with the inventor/IND holder for this program should we elect to file our own corporate IND for our Trimesta (estriol) program. The on-going and future development and commercialization of Effirma (flupirtine) for fibromyalgia is the responsibility of Meda AB and no assurance can be given that Meda will gain the FDA's acceptance of the NDA or obtain NDA approval from the FDA of flupirtine for fibromyalgia.

Our AEN-100 program for ALS is reliant on the investigator-initiated IND of PNA as well as their clinical trial capabilities. Although the planned Phase II/III clinical trial that we intend to conduct with PNA has received regulatory approval to proceed, such clinical trial is still the subject of further protocol development and IRB approval, either of which may alter the anticipated timing and budget of such clinical trial. In addition, because AEN-100 is not the same zinc formulation utilized by PNA in its previously completed Phase I/II safety study of zinc for ALS, PNA intends to conduct a Phase I study of AEN-100 in normal volunteers prior to initiating the Phase II/III clinical trial in ALS patients. The IRB approval process is ongoing for the planned Phase I study of AEN-100 and the planned Phase II/III clinical trial in ALS patients. Such Phase I study of AEN-100 may produce unanticipated and unacceptable safety, tolerability or bioavailability results that may substantially delay initiation of the planned Phase II/III clinical trial in ALS patients.

With respect to our synthetic biologic product candidates, we are dependent upon Intrexon's synthetic biology facilities and capabilities as we have no such facilities and capabilities of our own. We are also reliant on their vector engineering platform, gene expression switch technology and know-how. If any of the foregoing were to become inaccessible or terminated, it would be difficult for us to develop and commercialize our synthetic biologic product candidates.

We may incur substantial costs as a result of litigation or other proceedings relating to patent and other intellectual property rights, as well as costs associated with lawsuits.

If any other person files patent applications, or is issued patents, claiming technology also claimed by us in pending applications, we may be required to participate in interference proceedings in the U.S. Patent and Trademark Office to determine priority of invention. We, or our licensors, may also need to participate in interference proceedings involving our issued patents and pending applications of another entity.

The intellectual property environment in the area of DNA-based therapeutics is particularly complex, constantly evolving and highly fragmented. Other companies and institutions have issued patents and have filed or will file patent applications that may issue into patents that cover or attempt to cover genes, vectors, cell lines, and methods of making and using DNA and DNA-based therapy products used in, or similar to our product candidate, and technologies. We have not conducted freedom-to-use patent searches on all aspects of our product candidates or potential product candidates, and we may be unaware of relevant patents and patent applications of third parties. In addition, the freedom-to-use patent searches that have been conducted may not have identified all relevant issued patents or pending patents. We cannot provide assurance that our proposed products in this area will not ultimately be held to infringe one or more valid claims owned by third parties which may exist or come to exist in the future or that in such case we will be able to obtain a license from such parties on acceptable terms.

We cannot guarantee that the practice of our technologies will not conflict with the rights of others. In some foreign jurisdictions, we could become involved in opposition proceedings, either by opposing the validity of another’s foreign patent or by persons opposing the validity of our foreign patents.

We may also face frivolous litigation or lawsuits from various competitors or from litigious securities attorneys. The cost to us of any litigation or other proceeding relating to these areas, even if deemed frivolous or resolved in our favor, could be substantial and could distract management from our business. Uncertainties resulting from initiation and continuation of any litigation could have a material adverse effect on our ability to continue our operations.

If we infringe the rights of others we could be prevented from selling products or forced to pay damages.

If our products, methods, processes, and other technologies are found to infringe the proprietary rights of other parties, we could be required to pay damages, or we may be required to cease using the technology or to license rights from the prevailing party. Any prevailing party may be unwilling to offer us a license on commercially acceptable terms.

RISKS RELATING TO OUR STOCK

We will seek to raise additional funds in the future, which may be dilutive to stockholders or impose operational restrictions.

We expect to seek to raise additional capital in the future to help fund development of our proposed products. If we raise additional capital through the issuance of equity or of debt securities, the percentage ownership of our current stockholders will be reduced. We may also enter into strategic transactions, issue equity as part of license issue fees to our licensors, compensate consultants or settle outstanding payables using equity that may be dilutive. Our stockholders may experience additional dilution in net book value per share and any additional equity securities may have rights, preferences and privileges senior to those of the holders of our common stock. If we cannot raise additional funds, we will have to delay development activities of our products candidates.

We are substantially controlled by our current officers, directors, and principal stockholders.

Currently, our directors, executive officers, and principal stockholders beneficially own a substantial number of shares of our common stock. As a result, they will be able to exert substantial influence over the election of our Board of Directors and the vote on issues submitted to our stockholders. Our executive officers and directors beneficially owned approximately 8.7 million shares of our common stock, including stock options and warrants exercisable within 60 days of March 26, 2012. Our executive officers, directors and principal stockholders together beneficially owned approximately 12.1 million shares of our common stock, including the stock options and warrants exercisable within 60 days of March 26, 2012. Because our common stock has from time to time been “thinly traded”, the sale of a substantial number of shares by our executive officers, directors and principal stockholders would have an adverse effect on the market for our stock and our share price.

Our shares of common stock are from time to time thinly traded, so stockholders may be unable to sell at or near ask prices or at all if they need to sell shares to raise money or otherwise desire to liquidate their shares.

Our common stock has from time to time been “thinly-traded,” meaning that the number of persons interested in purchasing our common stock at or near ask prices at any given time may be relatively small or non-existent. This situation is attributable to a number of factors, including the fact that we are a small company that is relatively unknown to stock analysts, stock brokers, institutional investors and others in the investment community that generate or influence sales volume, and that even if we came to the attention of such persons, they tend to be risk-averse and would be reluctant to follow an unproven company such as ours or purchase or recommend the purchase of our shares until such time as we became more seasoned and viable. As a consequence, there may be periods of several days or more when trading activity in our shares is minimal or non-existent, as compared to a seasoned issuer which has a

large and steady volume of trading activity that will generally support continuous sales without an adverse effect on share price. We cannot give stockholders any assurance that a broader or more active public trading market for our common shares will develop or be sustained, or that current trading levels will be sustained.

We cannot assure you that the common stock will be liquid or that it will remain listed on the NYSE Amex.

We cannot assure you that we will be able to maintain the continued listing standards of the NYSE Amex (formerly the American Stock Exchange). The NYSE Amex requires companies to meet certain continued listing criteria including certain minimum stockholders' equity and equity prices per share as outlined in the NYSE Amex Exchange Company Guide. We may not be able to maintain such minimum stockholders' equity or prices per share or may be required to effect a reverse stock split to maintain such minimum prices and/or issue additional equity securities in exchange for cash or other assets, if available, to maintain certain minimum stockholders' equity required by the NYSE Amex. If we are delisted from the NYSE Amex then our common stock will trade, if at all, only on the over-the-counter market, such as the OTC Bulletin Board securities market, and then only if one or more registered broker-dealer market makers comply with quotation requirements. In addition, delisting of our common stock could depress our stock price, substantially limit liquidity of our common stock and materially adversely affect our ability to raise capital on terms acceptable to us, or at all. Delisting from the NYSE Amex could also have other negative results, including the potential loss of confidence by suppliers and employees, the loss of institutional investor interest and fewer business development opportunities. In order to remain listed on NYSE Amex, we are required to maintain a minimum stockholders’ equity of $6 million.

There may be issuances of shares of preferred stock in the future.

Although we currently do not have preferred shares outstanding, the Board of Directors could authorize the issuance of a series of preferred stock that would grant holders preferred rights to our assets upon liquidation, the right to receive dividends before dividends would be declared to common stockholders, and the right to the redemption of such shares, possibly together with a premium, prior to the redemption of the common stock. To the extent that we do issue preferred stock, the rights of holders of common stock could be impaired thereby, including without limitation, with respect to liquidation.

RISKS RELATED TO OUR INDUSTRY

We are subject to government regulation, compliance with which can be costly and difficult.

In the U.S., the formulation, manufacturing, packaging, storing, labeling, promotion, advertising, distribution and sale of our products are subject to regulation by various governmental agencies, including (1) the FDA, (2) the Federal Trade Commission, or FTC, (3) the Consumer Product Safety Commission, or CPSC, (4) the U.S. Department of Agriculture, or USDA. Our proposed activities may also be regulated by various agencies of the states, localities and foreign countries in which our proposed products may be manufactured, distributed and sold. The FDA, in particular, regulates the formulation, manufacture and labeling of over-the-counter, or OTC drugs, prescription drugs, medical foods, conventional foods, homeopathic OTC drugs, dietary supplements, and cosmetics such as those that we intend to distribute. FDA regulations require us and our suppliers to meet relevant cGMP regulations for the preparation, packing, labeling, and storage of all drugs and foods.

Any products manufactured or distributed by us pursuant to FDA approvals are subject to pervasive and continuing FDA regulation, including record-keeping requirements, reporting of adverse experiences, submitting periodic reports, drug sampling and distribution requirements, manufacturing or labeling changes, record-keeping requirements, and compliance with FDA promotion and advertising requirements. Drug manufacturers and their subcontractors are required to register their facilities with the FDA and state agencies, and are subject to periodic unannounced inspections for GMP compliance, imposing procedural and documentation requirements upon us and third-party manufacturers. Failure to comply with these regulations could result, among other things, in suspension of regulatory approval, recalls, suspension of production or injunctions, seizures, or civil or criminal sanctions. We cannot be certain that we or our present or future subcontractors will be able to comply with these regulations.

The FDA regulates prescription drug labeling and promotion activities. The FDA actively enforces regulations prohibiting the marketing of products for unapproved uses. The FDA permits the promotion of drugs for unapproved uses in certain circumstances, subject to stringent requirements. We and our product candidates are subject to a variety of state laws and regulations which may hinder our ability to market our products. Whether or not FDA approval has been obtained, approval by foreign regulatory authorities must be obtained prior to commencing clinical trials, and sales and marketing efforts in those countries. These approval procedures vary in complexity from country to country, and the processes may be longer or shorter than that required for FDA approval. We may incur significant costs to comply with these laws and regulations now or in the future.

We intend to develop our zinc candidate, AEN-100, as a drug and intend to file an IND with the FDA in order to conduct necessary clinical trials to support new medical claims and ultimately file one or more NDA with respect to such products which would subject us to time, expense and uncertainty associated with achieving approval of such NDA by the FDA.

The FDA, comparable foreign regulators and state and local pharmacy regulators impose substantial requirements upon clinical development, manufacture and marketing of pharmaceutical products. These and other entities regulate research and development and the testing, manufacture, quality control, safety, effectiveness, labeling, storage, record keeping, approval, advertising, and promotion of our products. The drug approval process required by the FDA under the Food, Drug, and Cosmetic Act generally involves:

- preclinical laboratory and animal tests;
- submission of an IND, prior to commencing human clinical trials;
- adequate and well-controlled human clinical trials to establish safety and efficacy for intended use;
- submission to the FDA of an NDA or Biologics License Application (BLA); and
- FDA review and approval of an NDA or BLA.

The testing and approval process requires substantial time, effort, and financial resources, and we cannot be certain that any approval will be granted on a timely basis, if at all.

Preclinical tests include laboratory evaluation of the product candidate, its chemistry, formulation and stability, and animal studies to assess potential safety and efficacy. Certain preclinical tests must be conducted in compliance with good laboratory practice regulations. Violations of these regulations can, in some cases, lead to invalidation of the studies, requiring them to be replicated. In some cases, long-term preclinical studies are conducted concurrently with clinical studies.

We will submit the preclinical test results, together with manufacturing information and analytical data, to the FDA as part of an IND, which must become effective before we begin human clinical trials. The IND automatically becomes effective 30 days after filing, unless the FDA raises questions about conduct of the trials outlined in the IND and imposes a clinical hold, in which case, the IND sponsor and FDA must resolve the matters before clinical trials can begin. It is possible that our submission may not result in FDA authorization to commence clinical trials.

Clinical trials must be supervised by a qualified investigator in accordance with good clinical practice (GCP) regulations, which include informed consent requirements. An independent IRB at each medical center reviews and approves and monitors the study, and is periodically informed of the study's progress, adverse events and changes in research. Progress reports are submitted annually to the FDA and more frequently if adverse events occur.

Human clinical trials of drug candidates typically have three sequential phases that may overlap:

Phase I: The drug is initially tested in healthy human subjects or patients for safety, dosage tolerance, absorption, metabolism, distribution, and excretion.

Phase II: The drug is studied in a limited patient population to identify possible adverse effects and safety risks, determine efficacy for specific diseases and establish dosage tolerance and optimal dosage.

Phase III: When phase II evaluations demonstrate that a dosage range is effective with an acceptable safety profile,

Phase III trials to further evaluate dosage, clinical efficacy and safety, are undertaken in an expanded patient population, often at geographically dispersed sites.

We cannot be certain that we will successfully complete Phase I, Phase II, or Phase III testing of our product candidates within any specific time period, if at all. Furthermore, the FDA, an IRB or the IND sponsor may suspend clinical trials at any time on various grounds, including a finding that subjects or patients are exposed to unacceptable health risk. Concurrent with these trials and studies, we also develop chemistry and physical characteristics data and finalize a manufacturing process in accordance with good manufacturing practice (GMP) requirements. The manufacturing process must conform to consistency and quality standards, and we must develop methods for testing the quality, purity, and potency of the final products. Appropriate packaging is selected and tested, and chemistry stability studies are conducted to demonstrate that the product does not undergo unacceptable deterioration over its shelf-life. Results of the foregoing are submitted to the FDA as part of a NDA (or BLA in case of biologic products) for marketing and commercial shipment approval. The FDA reviews each NDA or BLA submitted and may request additional information.

Once the FDA accepts the NDA or BLA for filing, it begins its in-depth review. The FDA has substantial discretion in the approval process and may disagree with our interpretation of the data submitted. The process may be significantly extended by requests for additional information or clarification regarding information already provided. As part of this

review, the FDA may refer the application to an appropriate advisory committee, typically a panel of clinicians. Manufacturing establishments often are inspected prior to NDA or BLA approval to assure compliance with GMPs and with manufacturing commitments made in the application.

Submission of an NDA or BLA with clinical data requires payment of a fee. In return, the FDA assigns a goal of ten months for issuing its "complete response," in which the FDA may approve or deny the NDA or BLA, or require additional clinical data. Even if these data are submitted, the FDA may ultimately decide the NDA or BLA does not satisfy approval criteria. If the FDA approves the NDA or BLA, the product becomes available for physicians prescription. Product approval may be withdrawn if regulatory compliance is not maintained or safety problems occur. The FDA may require post-marketing studies, also known as phase IV studies, as a condition of approval, and requires surveillance programs to monitor approved products that have been commercialized. The agency has the power to require changes in labeling or prohibit further marketing based on the results of post-marketing surveillance.

Satisfaction of these and other regulatory requirements typically takes several years, and the actual time required may vary substantially based upon the type, complexity and novelty of the product. Government regulation may delay or prevent marketing of potential products for a considerable period of time and impose costly procedures on our activities. We cannot be certain that the FDA or other regulatory agencies will approve any of our products on a timely basis, if at all. Success in preclinical or early-stage clinical trials does not assure success in later-stage clinical trials. Data obtained from preclinical and clinical activities are not always conclusive and may be susceptible to varying interpretations that could delay, limit or prevent regulatory approval. Even if a product receives regulatory approval, the approval may be significantly limited to specific indications or uses.

Even after regulatory approval is obtained, later discovery of previously unknown problems with a product may result in restrictions on the product or even complete withdrawal of the product from the market. Delays in obtaining, or failures to obtain regulatory approvals would have a material adverse effect on our business.

The FDA's policies may change, and additional government regulations may be enacted which could prevent or delay regulatory approval of our potential products. Increased attention to the containment of health care costs worldwide could result in new government regulations materially adverse to our business. We cannot predict the likelihood, nature or extent of adverse governmental regulation that might arise from future legislative or administrative action, either in the U.S. or abroad.

We do not have a guarantee of patent restoration and marketing exclusivity of the ingredients for our drugs even if we are granted FDA approval of our products.

The U.S. Drug Price Competition and Patent Term Restoration Act of 1984 (Hatch-Waxman) permits the FDA to approve Abbreviated New Drug Applications (ANDAs) for generic versions of innovator drugs, as well as NDAs with less original clinical data, and provides patent restoration and exclusivity protections to innovator drug manufacturers. The ANDA process permits competitor companies to obtain marketing approval for drugs with the same active ingredient and for the same uses as innovator drugs, but does not require the conduct and submission of clinical studies demonstrating safety and efficacy. As a result, a competitor could copy any of our drugs and only need to submit data demonstrating that the copy is bioequivalent to gain marketing approval from the FDA. Hatch-Waxman requires a competitor that submits an ANDA, or otherwise relies on safety and efficacy data for one of our drugs, to notify us and/or our business partners of potential infringement of our patent rights. We and/or our business partners may sue the company for patent infringement, which would result in a 30-month stay of approval of the competitor's application. The discovery, trial and appeals process in such suits can take several years. If the litigation is resolved in favor of the generic applicant or the challenged patent expires during the 30-month period, the stay is lifted and the FDA may approve the application. Hatch-Waxman also allows competitors to market copies of innovator products by submitting significantly less clinical data outside the ANDA context. Such applications, known as "505(b)(2) NDAs" or "paper NDAs," may rely on clinical investigations not conducted by or for the applicant and for which the applicant has not obtained a right of reference or use and are subject to the ANDA notification procedures described above.

The law also permits restoration of a portion of a product's patent term that is lost during clinical development and NDA review, and provides statutory protection, known as exclusivity, against FDA approval or acceptance of certain competitor applications. Restoration can return up to five years of patent term for a patent covering a new product or its use to compensate for time lost during product development and regulatory review. The restoration period is generally one-half the time between the effective date of an IND and submission of an NDA, plus the time between NDA submission and its approval (subject to the five-year limit), and no extension can extend total patent life beyond 14 years after the drug approval date. Applications for patent term extension are subject to U.S. Patent and Trademark Office (USPTO) approval, in conjunction with FDA. Approval of these applications takes at least nine months, and there can be no guarantee that it will be given at all.

Hatch-Waxman also provides for differing periods of statutory protection for new drugs approved under an NDA. Among the types of exclusivity are those for a "new molecular entity" and those for a new formulation or indication for a previously-approved drug. If granted, marketing exclusivity for the types of products that we are developing, which include only drugs with innovative changes to previously-approved products using the same active ingredient, would prohibit the FDA from approving an ANDA or 505(b)(2) NDA relying on our safety and efficacy data for three years. This three-year exclusivity, however, covers only the innovation associated with the original NDA. It does not prohibit the FDA from approving applications for drugs with the same active ingredient but without our new innovative change. These marketing exclusivity protections do not prohibit the FDA from approving a full NDA, even if it contains the innovative change.

SPECIAL NOTE REGARDING FORWARD-LOOKING STATEMENTS

This prospectus contains forward-looking statements within the meaning of Section 27A of the Securities Act of 1933 and 21E of the Securities Exchange Act of 1934. You should not place undue reliance on these statements. These forward-looking statements include statements that reflect the current views of our senior management with respect to our financial performance and future events with respect to our business and our industry in general. Statements that include the words “expect,” “intend,” “plan,” “believe,” “project,” “forecast,” “estimate,” “may,” “should,” “anticipate” and sir statements of a future or forward-looking nature identify forward-looking statements. Forward-looking statements address matters that involve risks and uncertainties. Accordingly, there are or will be important factors that could cause our actual results to differ materially from those indicated in these statements. We believe that these factors include, but are not limited to, the following:

a failure of our product candidates to be demonstrably safe and effective;

a failure to obtain regulatory approval for our products or to comply with ongoing regulatory requirements;

a lack of acceptance of our product candidates in the marketplace;

a failure by us to become or remain profitable;

an inability by us to obtain the capital necessary to fund our research and development activities;

a loss of any of our key scientist or management personnel.

The foregoing factors should not be construed as exhaustive and should be read together with the other cautionary statements included in this prospectus and other reports we file with the Securities and Exchange Commission. The forward-looking statements speak as of the date made and are not guarantees of future performance. If one or more events related to these or other risks or uncertainties materialize, or if our underlying assumptions prove to be incorrect, actual results may differ materially from what we anticipate. We undertake no obligation to publicly update or revise any forward-looking statement, other than as required by law.

USE OF PROCEEDS

We will not receive any proceeds from the disposition by the selling stockholders of any of the shares covered by this prospectus.

SELLING STOCKHOLDERS

This prospectus covers the disposition by the selling stockholders identified below, or their transferee(s), of a total of 3,223,558 shares of our common stock comprised of 3,123,558 shares of common stock issued and outstanding and 100,000 shares of common stock issuable upon exercise of warrants. All of the shares included in this offering were issued as described below.

The following table sets forth the number of shares of the common stock owned by the selling stockholder as of March 30, 2012 and after giving effect to this offering assuming all of the shares covered hereby are sold by the selling stockholder. The percentage of beneficial ownership is based on 32,751,556 shares of our common stock outstanding as of March 30, 2012.

Selling Stockholder	**Shares Beneficially Owned Before Offering (1)**	**Percentage of Beneficial Ownership Before Offering (1)**	**Total Shares Offered By Selling Stockholder (2)**	**Shares Beneficially Owned After Offering (1)**	**Percentage of Beneficial Ownership After Offering (1)**
Intrexon Corporation	3,123,558(3)	9.54%	3,123,558	0	0%
Griffin Securities, Inc.	100,000(4)	*	100,000	0	0%
Total	3,223,558	9.84%	3,223,558	0	0%

*less than 1%

(1) Beneficial ownership is determined in accordance with SEC rules, beneficial ownership includes any shares as to which the security or stockholder has sole or shared voting power or investment power, and also any shares which the security or stockholder has the right to acquire within 60 days of the date hereof, whether through the exercise or conversion of any stock option, convertible security, warrant or other right. The indication herein that shares are beneficially owned is not an admission on the part of the security or stockholder that he, she or it is a direct or indirect beneficial owner of those shares.

(2) Assumes the sale of all shares offered under this prospectus by the selling stockholders.

(3) Randal J. Kirk, the Chief Executive Officer of the selling stockholder, Intrexon Corporation, directly and through certain affiliates, has voting and dispositive power over a majority of the outstanding capital stock of Intrexon Corporation. Mr. Kirk may therefore be deemed to have voting and dispositive power over the shares of the issuer owned by Intrexon Corporation. Mr. Kirk disclaims beneficial ownership of such shares, except to the extent of any pecuniary interest therein.

(4) All of these shares are issuable upon the exercise of warrants. Adrian Stecyk, the Chairman and Chief Executive Officer of Griffin Securities, Inc. has voting and dispositive power over the capital stock of Griffin Securities, Inc.

On November 18, 2011, we entered into a Channel Agreement with Intrexon Corporation that governs a “channel collaboration” arrangement in which we intend to use Intrexon’s technology directed towards the production of PGIS, through the use of *in vivo* conditionally regulated embedded controllable bioreactors for the treatment of PAH. The Channel Agreement establishes committees comprised of our representatives and Intrexon representatives that will govern activities related to the PAH Program in the areas of project establishment, chemistry, manufacturing and controls, clinical and regulatory matters, commercialization efforts and intellectual property. As partial consideration for execution of the Channel Agreement, we entered into a Stock Purchase Agreement with Intrexon pursuant to which we issued to Intrexon a number of shares of our common stock equal to 9.995% of the number of shares of our common stock issued and outstanding following and giving effect to such issuance (the “First Tranche”) at a purchase price equal to the $0.001 par value of such shares, which issuance was deemed paid in partial consideration for the execution and delivery of the Channel Agreement. We also agreed to issue additional shares of our common stock to Intrexon upon dosing of the first patient in a Phase II clinical trial sponsored by us in the U.S., or similar study as the parties may agree in a country other than the U.S. Under the Stock Purchase Agreement, Intrexon is entitled, at its election, to:

(i) participate in our future securities offerings that constitute “Qualified Financings” and purchase securities equal to 19.99% of the number of shares of common stock or other securities sold in such offering. For this purpose, a “Qualified Financing” means a sale of our common stock or equity securities convertible into our common stock in a public or private offering, raising gross proceeds of at least $5.0 million, where the sale of shares is either registered under the Securities Act of 1933, as amended (the “Securities Act”), at the time of issuance or we agree to register the resale of such shares, and

(ii) without restriction, purchase an additional number of shares of our common stock in the open market, or otherwise, that do not exceed an additional 10% of the number of shares of common stock then issued and outstanding.

In connection with the transactions contemplated by the Stock Purchase Agreement, and pursuant to a Registration Rights Agreement that was executed and delivered by the parties at the First Tranche closing, we agreed to file a “resale” registration statement registering the resale of the First Tranche shares within 120 days of the First Tranche closing.

On December 20, 2012, we entered into a Financial Advisory Agreement with Griffin Securities, Inc. (“Griffin”), whereby Griffin agreed to act as a non-exclusive financial advisor to us for a twelve month period of time. As compensation for such services, Griffin is paid a monthly fee of Ten Thousand Dollars ($10,000) and was issued a warrant exercisable for 100,000 shares of our common stock. The warrant is exercisable upon issuance, February 2, 2012, for a period of five years from such date at an exercise price equal to the price of our common stock on the date of issue, has a cashless exercise feature and is entitled to piggyback registration rights.

PLAN OF DISTRIBUTION

The selling security holders of our common stock and any of their transferees, pledgees, assignees, donees, and successors-in-interest may, from time to time, sell any or all of their shares of common stock on the stock exchange, market or trading facility on which the shares are traded or in private transactions. These sales may be at prevailing market prices or negotiated prices. A selling security holder may use any one or more of the following methods when selling shares:

ordinary brokerage transactions and transactions in which the broker-dealer solicits purchasers;

block trades in which the broker-dealer will attempt to sell the shares as agent but may position and resell a portion of the block as principal to facilitate the transaction;

purchases by a broker-dealer as principal and resale by the broker-dealer for its account;

an exchange distribution in accordance with the rules of the applicable exchange;

privately negotiated transactions;

broker-dealers may agree with the selling security holders to sell a specified number of such shares at a stipulated price per share;

a combination of any such methods of sale; or

any other method permitted pursuant to applicable law.

The selling security holders may also sell shares under Rule 144 under the Securities Act, if available, rather than under this prospectus.

Broker-dealers engaged by the selling security holders may arrange for other broker-dealers to participate in sales. Broker-dealers may receive commissions or discounts from the selling security holders (or, if any broker-dealer acts as agent for the purchaser of shares, from the purchaser) in amounts to be negotiated. The selling security holders do not expect these commissions and discounts relating to their sales of shares to exceed what is customary in the types of transactions involved.

The selling security holders and any broker-dealers or agents that are involved in selling the shares of common stock may be deemed to be "underwriters" within the meaning of the Securities Act in connection with such sales. In such event, any commissions received by such broker-dealers or agents and any profit on the resale of the shares purchased by them may be deemed to be underwriting commissions or discounts under the Securities Act. Because the selling security holders may be deemed to be underwriters within the meaning of the Securities Act, they will be subject to the prospectus delivery requirements of the Securities Act. Discounts, concessions, commissions and similar selling expenses, if any, that can be attributed to the sale of common stock will be paid by the selling security holders and/or the purchasers. Each of the selling security holders has represented and warranted to our company that it acquired the securities subject to this registration statement in the ordinary course of such selling security holder's business and, at the time of its purchase of such securities such selling security holder had no agreements or understandings, directly or indirectly, with any person to distribute any such securities.

There is no underwriter or coordinating broker acting in connection with the proposed sale of the resale shares by the selling security holders. We are required to pay certain fees and expenses incurred by us incident to the registration of the shares. We have agreed to indemnify the selling security holders against certain losses, claims, damages and liabilities, including liabilities under the Securities Act.

The selling security holders may from time to time pledge or grant a security interest in some or all of the shares owned by them and, if they default in the performance of their secured obligations, the pledgees or secured parties may offer and sell shares of common stock from time to time under this prospectus, or under an amendment to this prospectus under Rule 424(b)(3) or other applicable provision of the Securities Act amending the list of the selling security holders to include the pledgee, transferee or other successors-in-interest as selling security holders under this prospectus. Upon our company being notified in writing by a selling security holder that any material arrangement has been entered into with a broker-dealer for the sale of common stock through a block trade, special offering, exchange distribution or secondary distribution or a purchase by a broker or dealer, a supplement to this prospectus will be filed, if required, pursuant to Rule 424(b) under the Securities Act, disclosing (i) the name of the selling security holders and of the participating broker-dealer(s), (ii) the number of shares involved, (iii) the price at which such the shares of common stock were sold, (iv) the commissions paid or discounts or concessions allowed to such broker-dealer(s), where applicable, (v) that such broker-dealer(s) did not conduct any investigation to verify the information set out or incorporated by reference in this prospectus, and (vi) other facts material to the transaction. In addition, upon our company being notified in writing by a selling security holder that a donee or pledgee intends to sell more than 500 shares of common stock, a supplement to this prospectus will be filed if then required in accordance with applicable securities law.

Under applicable rules and regulations under the Exchange Act, any person engaged in the distribution of the resale shares may not simultaneously engage in market making activities with respect to our common stock for a period of two business days prior to the commencement of the distribution. In addition, the selling security holders will be subject to applicable provisions of the Exchange Act and the rules and regulations thereunder, including Regulation M, which may limit the timing of purchases and sales of shares of our common stock by the selling security holders or any other person. We will make copies of this prospectus available to the selling security holders and have informed it of the need to deliver a copy of this prospectus to each purchaser at or prior to the time of the sale.

LEGAL MATTERS

Gracin & Marlow, LLP, New York, New York will issue an opinion about certain legal matters with respect to the securities.

EXPERTS

The financial statements incorporated in this prospectus from our Annual Report on Form 10-K for the year ended December 31, 2011 have been audited by Berman & Company, P.A., an independent registered public accounting firm, as stated in their report, which is incorporated by reference, which report expresses an unqualified opinion. The financial statements have been incorporated upon the authority of said firm as experts in accounting and auditing in giving said reports.

WHERE YOU CAN FIND MORE INFORMATION

We file annual, quarterly and special reports, proxy statements and other information with the Securities and Exchange Commission. You may read and copy any document we file at the Commission's public reference room located at 100 F Street N.E., Washington, D.C. 20549. Please call the Commission at 1-800-SEC-0330 for further information on the operation of the public reference room. Our public filings are also available to the public at the Commission's web site at http://www.sec.gov.

This prospectus is part of a registration statement on Form S-3 that we have filed with the Commission under the Securities Act. This prospectus does not contain all of the information in the registration statement. We have omitted certain parts of the registration statement, as permitted by the rules and regulations of the Commission. You may inspect and copy the registration statement, including exhibits, at the Commission's public reference room or Internet site.

INCORPORATION OF CERTAIN DOCUMENTS BY REFERENCE

The Commission allows us to "incorporate by reference" the information we file with it which means that we can disclose important information to you by referring you to those documents instead of having to repeat the information in this prospectus. The information incorporated by reference is considered to be part of this prospectus, and later information that we file with the Commission will automatically update and supersede this information. We incorporate by reference the documents listed below and any future filings made with the Commission under Sections 13(a), 13(c), 14 or 15(d) of the Exchange Act between the date of this prospectus and the termination of the offering:

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Our annual report on Form 10-K for the fiscal year ended December 31, 2011 filed with the Securities and Exchange Commission on March 30, 2012;

Our Definitive Schedule 14A Proxy Statement filed on January 4, 2012;
Our current report on Form 8-K/A filed with the Securities and Exchange Commission on February 3, 2012;

Our current report on Form 8-K filed with the Securities and Exchange Commission on February 6, 2012;

Our current report on Form 8-K filed with the Securities and Exchange Commission on February 7, 2012;

Our current report on Form 8-K filed with the Securities and Exchange Commission on February 13, 2012;

Our current report on Form 8-K filed with the Securities and Exchange Commission on February 16, 2012;

Our current report on Form 8-K filed with the Securities and Exchange Commission on March 12, 2012;

Our current report on Form 8-K filed with the Securities and Exchange Commission on March 30, 2012; and

The description of our common stock set forth in our registration statement on Form 8-A, filed with the Commission on January 29, 1993 (File No. 000-21156).

You may obtain, free of charge, a copy of any of these documents (other than exhibits to these documents unless the exhibits are specifically incorporated by reference into these documents or referred to in this prospectus) by writing or calling us at the following address and telephone number:

DISCLOSURE OF COMMISSION POSITION ON INDEMNIFICATION FOR SECURITIES ACT LIABILITIES

Our amended and restated bylaws contain provisions that permit us to indemnify our directors and officers to the full extent permitted by Nevada law, and our Articles of Incorporation, as amended, contains provisions that eliminate the personal liability of our directors in each case for monetary damages to us or our stockholders for breach of their fiduciary duties, except to the extent that Nevada law prohibits indemnification or elimination of liability. These provisions do not limit or eliminate our rights or the rights of any stockholder to seek an injunction or any other non-monetary relief in the event of a breach of a director's or officer's fiduciary duty. In addition, these provisions apply only to claims against a director or officer arising out of his or her role as a director or officer and do not relieve a director or officer from liability if he or she engaged in willful misconduct or a knowing violation of the criminal law or any federal or state securities law.

The rights of indemnification provided in our amended and restated bylaws are not exclusive of any other rights that may be available under any insurance or other agreement, by vote of stockholders or disinterested directors or otherwise.

Insofar as indemnification for liabilities arising under the Securities Act may be permitted to directors, officers or persons controlling us pursuant to the foregoing provisions, we have been informed that in the opinion of the SEC this type of indemnification is against public policy as expressed in the Securities Act and is therefore unenforceable.

3985 Research Park Drive, Suite 200

Ann Arbor, MI 48108

Attention: Corporate Secretary

(734) 332-7800

3,223,558 Shares

Common Stock

PROSPECTUS DATED APRIL 4, 2012

You should rely only on the information contained or incorporated by reference in this prospectus. We have not authorized anyone to provide you with different information. You should not assume that the information contained or incorporated by reference in this prospectus is accurate as of any date other than the date of this prospectus. We are not making an offer of these securities in any state where the offer is not permitted.

PART II

INFORMATION NOT REQUIRED IN THE PROSPECTUS

Item 14. Other Expenses of Issuance and Distribution.

The following table sets forth the estimated fees and expenses in connection with the shelf registration of the common stock registered under this registration statement, other than any underwriting discounts and commissions. The actual amounts of such fees and expenses will be determined from time to time. All amounts shown are estimates except for the Securities and Exchange Commission registration fee.

SEC registration fee	$816.42
Legal fees and expenses	2,500
Accounting fees and expenses	2,500
Transfer agent and registrar fees and expenses	1,000
Printing and engraving expenses	1,000
Miscellaneous	183.58
Total	$8,000

Item 15. Indemnification of Directors and Officers.

Section 78.138 of the Nevada Revised Statute provides that a director or officer is not individually liable to the corporation or its stockholders or creditors for any damages as a result of any act or failure to act in his capacity as a director or officer unless it is proven that (1) his act or failure to act constituted a breach of his fiduciary duties as a director or officer and (2) his breach of those duties involved intentional misconduct, fraud or a knowing violation of law.

This provision is intended to afford directors and officers protection against and to limit their potential liability for monetary damages resulting from suits alleging a breach of the duty of care by a director or officer. As a consequence of this provision, stockholders of our company will be unable to recover monetary damages against directors or officers for action taken by them that may constitute negligence or gross negligence in performance of their duties unless such conduct falls within one of the foregoing exceptions. The provision, however, does not alter the applicable standards governing a director's or officer's fiduciary duty and does not eliminate or limit the right of our company or any stockholder to obtain an injunction or any other type of non-monetary relief in the event of a breach of fiduciary

duty.

The Registrant's Articles of Incorporation, as amended, and amended and restated bylaws provide for indemnification of directors, officers, employees or agents of the Registrant to the fullest extent permitted by Nevada law (as amended from time to time). Section 78.7502 of the Nevada Revised Statute provides that such indemnification may only be provided if the person acted in good faith and in a manner he reasonably believed to be in, or not opposed to, the best interest of the Registrant and, with respect to any criminal action or proceeding, had no reasonable cause to behave his conduct was unlawful.

Item 16. Exhibits.

3.1	Certificate of Incorporation, as amended (Incorporated by reference to (i) Exhibit 3.1 of the Registrant's Current Report on Form 8-K filed October 16, 2008, (ii) Exhibit 3.1 of the Registrant's Quarterly Report on Form 10-Q for the quarterly period ended June 30, 2001 filed August 14, 2001 and (iii) Exhibits 3.1, 4.1 and 4.2 of the Registrant's Quarterly Report on Form 10-Q for the quarterly period ended June 30, 1998 filed August 14, 1998)
3.2	Articles of Merger (Incorporated by reference to Exhibit 3.1 of the Registrant's Current Report on Form 8-K filed October 19, 2009.)
3.3	Certificate of Merger filed with the Secretary of State of Delaware (Incorporated by reference to Exhibit 3.2 of the Registrant's Current Report on Form 8-K filed October 19, 2009.)
3.4	Articles of Incorporation filed with the Nevada Secretary of State (Incorporated by reference to Exhibit 3.3 of the Registrant's Current Report on Form 8-K filed October 19, 2009.)
3.5	Bylaws (Incorporated by reference to (i) Exhibit 3.4 of the Registrant's Current Report on Form 8-K filed October 19, 2009 and (ii) Exhibit 3.1 of the Registrant's Current Report on Form 8-K filed June 3, 2010.)
3.6	Amended and Restated Bylaws Adopted and Effective October 31, 2011 (Incorporated by reference to Exhibit 3.1 of the Registrant's Current Report on Form 8-K filed October 2, 2011.)
3.7	Certificate of Amendment to Articles of Incorporation (Incorporated by reference to Exhibit 3.1 of the Registrant's Current Report on Form 8-K filed February 16, 2012.)
4.1	Form of Warrant to Purchase Common Stock by and between Griffin Securities, Inc. and Adeona Pharmaceuticals, Inc. (Incorporated by reference to Exhibit 4.10 of the Registrant's Annual Report on Form 10-K filed March 30, 2012)
5.1	Legal opinion of Gracin & Marlow, LLP*
10.1	Financial Advisory Agreement by and between Griffin Securities, Inc. and Adeona Pharmaceuticals, Inc. dated as of December 20, 2011. (Incorporated by reference to Exhibit 10.34 of the Registrant's Annual Report on Form 10-K filed March 30, 2012)
10.2	Registration Rights Agreement with Intrexon Corporation (Incorporated by reference to Exhibit 10.3 of the Registrant's Current Report on Form 8-K filed November 21, 2011.)
23.1	Consent of Berman & Company, P.A.*
23.3	Consent of Gracin & Marlow, LLP (included in Exhibit 5.1)
24.1	Powers of Attorney for our directors (included in the signature page)*

* Filed herewith

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Item 17. Undertakings.

(a) The undersigned registrant hereby undertakes:

(1) To file, during any period in which offers or sales are being made, a post-effective amendment to this registration statement:

(i) To include any prospectus required by Section 10(a)(3) of the Securities Act of 1933;

(ii) To reflect in the prospectus any facts or events arising after the effective date of the registration statement (or the most recent post-effective amendment thereof) which, individually or in the aggregate, represent a fundamental change in the information set forth in the registration statement. Notwithstanding the foregoing, any increase or decrease in volume of securities offered (if the total dollar value of securities offered would not exceed that which was registered) and any deviation from the low or high end of the estimated maximum offering range may be reflected in the form of prospectus filed with the SEC pursuant to Rule 424(b) if, in the aggregate, the changes in volume and price represent no more than a 20 percent change in the maximum aggregate offering price set forth in the "Calculation of Registration Fee" table in the effective registration statement; and

(iii) To include any material information with respect to the plan of distribution not previously disclosed in the registration statement or any material change to such information in the registration statement;

provided, however , that the undertakings set forth in paragraphs (1)(i), (1)(ii) and (1)(iii) above do not apply if the information required to be included in a post-effective amendment by those paragraphs is contained in reports filed with or furnished to the Commission by the registrant pursuant to Section 13 or Section 15(d) of the Securities Exchange Act of 1934 that are incorporated by reference in the registration statement or is contained in a form of prospectus filed pursuant to Rule 424(b) that is a part of the registration statement.

(2) That, for the purpose of determining any liability under the Securities Act of 1933, each such post-effective amendment shall be deemed to be a new registration statement relating to the securities offered therein, and the offering of such securities at that time shall be deemed to be the initial bona fide offering thereof.

(3) To remove from registration by means of a post-effective amendment any of the securities being registered which remain unsold at the termination of the offering.

(4) That, for the purpose of determining liability under the Securities Act of 1933 to any purchaser:

(i) Each prospectus filed by the registrant pursuant to Rule 424(b)(3) shall be deemed to be part of the registration statement as of the date the filed prospectus was deemed part of and included in the registration statement; and

(ii) Each prospectus required to be filed pursuant to Rule 424(b)(2), (b)(5), or (b)(7) as part of a registration statement in reliance on Rule 430B relating to an offering made pursuant to Rule 415(a)(1)(i), (vii), or (x) for the purpose of providing the information required by section 10(a) of the Securities Act of 1933 shall be deemed to be part of and included in the registration statement as of the earlier of the date such form of prospectus is first used after effectiveness or the date of the first contract of sale of securities in the offering described in the prospectus. As provided in Rule 430B, for liability purposes of the issuer and any person that is at that date an underwriter, such date shall be deemed to be a new effective date of the registration statement relating to the securities in the registration statement to which that prospectus relates, and the offering of such securities at that time shall be deemed to be the initial bona fide offering thereof. Provided, however, that no statement made in a registration statement or prospectus that is part of the registration statement or made in a document incorporated or deemed incorporated by reference into the registration statement or prospectus that is part of the registration statement will, as to a purchaser with a time of contract of sale prior to such effective date, supersede or modify any statement that was made in the registration statement or prospectus that was part of the registration statement or made in any such document immediately prior to such effective date.

(5) That, for the purpose of determining liability of the registrant under the Securities Act of 1933 to any purchaser in the initial distribution of the securities, the undersigned registrant undertakes that in a primary offering of securities of the undersigned registrant pursuant to this registration statement, regardless of the underwriting method used to sell the securities to the purchaser, if the securities are offered or sold to such purchaser by means of any of the following communications, the undersigned registrant will be a seller to the purchaser and will be considered to offer or sell such securities to such purchaser:

(i) Any preliminary prospectus or prospectus of the undersigned registrant relating to the offering required to be filed pursuant to Rule 424;

(ii) Any free writing prospectus relating to the offering prepared by or on behalf of the undersigned registrant or used or referred to by the undersigned registrant;

(iii) The portion of any other free writing prospectus relating to the offering containing material information about the undersigned registrant or its securities provided by or on behalf of the undersigned registrant; and

(iv) Any other communication that is an offer in the offering made by the undersigned registrant to the purchaser.

(b) The undersigned registrant hereby undertakes that, for purposes of determining any liability under the Securities Act of 1933, each filing of the registrant's annual report pursuant to Section 13(a) or 15(d) of the Securities Exchange Act of 1934 (and, where applicable, each filing of an employee benefit plan's annual report pursuant to Section 15(d) of the Securities Exchange Act of 1934) that is incorporated by reference in the registration statement shall be deemed to be a new registration statement relating to the securities offered therein, and the offering of such securities at that time shall be deemed to be the initial *bona fide* offering thereof.

(c) Insofar as indemnification for liabilities arising under the Securities Act of 1933 may be permitted to directors, officers, and controlling persons of the registrant pursuant to the foregoing provisions, or otherwise, the registrant has been advised that in the opinion of the Securities and Exchange Commission such indemnification is against public policy as expressed in the Securities Act and is, therefore, unenforceable. In the event that a claim for indemnification against such liabilities (other than the payment by the registrant of expenses incurred or paid by a director, officer, or controlling person of the registrant in the successful defense of any action, suit or proceeding) is asserted by such director, officer, or controlling person in connection with the securities being registered, the registrant will, unless in the opinion of its counsel the matter has been settled by controlling precedent, submit to a court of appropriate jurisdiction the question whether such indemnification by it is against public policy as expressed in the Securities Act and will be governed by the final adjudication of such issue.

(d) The registrant hereby undertakes to file an application for the purpose of determining the eligibility of the trustee to act under subsection (a) of Section 310 of the Trust Indenture Act in accordance with the rules and regulations prescribed by the Securities and Exchange Commission under Section 305(b)(2) of the Trust Indenture Act.

(6) That, for purposes of determining any liability under the Securities Act of 1933, the information omitted from the form of prospectus filed as part of this registration statement in reliance upon Rule 430A and contained in a form of prospectus filed by the registrant pursuant to Rule 424(b)(1) or (4) or 497(h) under the Securities Act of 1933 shall be deemed to be part of this registration statement as of the time it was declared effective;

(7) That, for the purpose of determining any liability under the Securities Act of 1933, each post-effective amendment that contains a form of prospectus shall be deemed to be a new registration statement relating to the securities offered

therein, and the offering of such securities at that time shall be deemed to be the initial bona fide offering thereof; and

SIGNATURES

Pursuant to the requirements of the Securities Act of 1933, the Registrant certifies that it has reasonable grounds to believe that it meets all of the requirements for filing on Form S-3 and has duly caused this registration statement to be signed on its behalf by the undersigned, thereunto duly authorized, in the City of Ann Arbor, State of Michigan, April 4, 2012.

SYNTHETIC BIOLOGICS, INC.

By: /s/ Jeffrey Riley
Chairman, Chief Executive Officer

and President
(Principal Executive Officer)

By: /s/ C. Evan Ballantyne
Chief Financial Officer (Principal
Financial and Accounting Officer)

POWER OF ATTORNEY

KNOW ALL MEN BY THESE PRESENTS, that each person whose signature appears below constitutes and appoints Jeff Riley and C. Evan Ballantyne his true and lawful attorney-in-fact and agent with full power of substitution and re-substitution, for him and in his name, place and stead, in any and all capacities to sign any or all amendments (including, without limitation, post-effective amendments) to this Registration Statement, any related Registration Statement filed pursuant to Rule 462(b) under the Securities Act of 1933 and any or all pre- or post-effective amendments thereto, and to file the same, with all exhibits thereto, and all other documents in connection therewith, with the Securities and Exchange Commission, granting unto said attorney-in-fact and agent, full power and authority to do and perform each and every act and thing requisite and necessary to be done in and about the premises, as fully for all intents and purposes as he or she might or could do in person, hereby ratifying and confirming that said attorney-in-fact and agent, or any substitute or substitutes for him, may lawfully do or cause to be done by virtue hereof.

Pursuant to the requirements of the Securities Act of 1933, this Registration Statement has been signed by the following persons in the capacities and on the dates stated.

Signature	Title	Date
/s/ Jeffrey Riley Jeffrey Riley	Chairman, Chief Executive Officer and President (Principal Executive Officer)	April 4, 2012
/s/ Steve H. Kanzer Steve H. Kanzer	Director	April 4, 2012
/s/ Jeffrey J. Kraws Jeffrey J. Kraws	Director	April 4, 2012
/s/ Jeffrey Wolf Jeffrey Wolf	Director	April 4, 2012
/s/ James S. Kuo James S. Kuo	Director	April 4, 2012
/s/ Nelson Stacks Nelson Stacks	Director	April 4, 2012
/s/ Scott Tarriff Scott Tarriff	Director	April 4, 2012

EXHIBIT INDEX

Exhibit	Description
3.1	Certificate of Incorporation, as amended (Incorporated by reference to (i) Exhibit 3.1 of the Registrant's Current Report on Form 8-K filed October 16, 2008, (ii) Exhibit 3.1 of the Registrant's Quarterly Report on Form 10-Q for the quarterly period ended June 30, 2001 filed August 14, 2001 and (iii) Exhibits 3.1, 4.1 and 4.2 of the Registrant's Quarterly Report on Form 10-Q for the quarterly period ended June 30, 1998 filed August 14, 1998)
3.2	Articles of Merger (Incorporated by reference to Exhibit 3.1 of the Registrant's Current Report on Form 8-K filed October 19, 2009.)
3.3	Certificate of Merger filed with the Secretary of State of Delaware (Incorporated by reference to Exhibit 3.2 of the Registrant's Current Report on Form 8-K filed October 19, 2009.)
3.4	Articles of Incorporation filed with the Nevada Secretary of State (Incorporated by reference to Exhibit 3.3 of the Registrant's Current Report on Form 8-K filed October 19, 2009.)
3.5	Bylaws (Incorporated by reference to (i) Exhibit 3.4 of the Registrant's Current Report on Form 8-K filed October 19, 2009 and (ii) Exhibit 3.1 of the Registrant's Current Report on Form 8-K filed June 3, 2010.)
3.6	Amended and Restated Bylaws Adopted and Effective October 31, 2011 (Incorporated by reference to Exhibit 3.1 of the Registrant's Current Report on Form 8-K filed October 2, 2011.)
3.7	Certificate of Amendment to Articles of Incorporation (Incorporated by reference to Exhibit 3.1 of the Registrant's Current Report on Form 8-K filed February 16, 2012.)
4.1	Form of Warrant to Purchase Common Stock by and between Griffin Securities, Inc. and Adeona Pharmaceuticals, Inc. (Incorporated by reference to Exhibit 4.10 of the Registrant's Annual Report on Form 10-K filed March 30, 2012)
5.1	Legal opinion of Gracin & Marlow, LLP*
10.1	Financial Advisory Agreement by and between Griffin Securities, Inc. and Adeona Pharmaceuticals, Inc. dated as of December 20, 2011. (Incorporated by reference to Exhibit 10.34 of the Registrant's Annual Report on Form 10-K filed March 30, 2012)
10.2	Registration Rights Agreement with Intrexon Corporation (Incorporated by reference to Exhibit 10.3 of the Registrant's Current Report on Form 8-K filed November 21, 2011.)
23.1	Consent of Berman & Company, P.A.*
23.3	Consent of Gracin & Marlow, LLP (included in Exhibit 5.1)

24.1 Powers of Attorney for our directors (included in the signature page)*

* Filed herewith

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