

CITIGROUP INC
Form 424B2
August 23, 2018

Filed Pursuant to Rule 424(b)(2)

Registration Statement Nos. 333-216372 and 333-216372-01
Citigroup Global Markets Holdings Inc.

\$54,880,000

Absolute Return Trigger S&P 500® Index-Linked Notes due August 5, 2020

All Payments Due from Citigroup Global Markets Holdings Inc.

Fully and Unconditionally Guaranteed by Citigroup Inc.

Unlike conventional debt securities, the notes offered by this pricing supplement do not pay interest. The amount that you will be paid on your notes on the maturity date (August 5, 2020) is based on the performance of the S&P 500® Index (the “underlier”) as measured from and including the trade date to and including the determination date (August 3, 2020), unless a barrier event has occurred.

A barrier event will occur if, on any day during the measurement period, which is the period from but excluding the trade date to and including the determination date, the closing level of the underlier increases or decreases by more than the maximum return of 19.75% from the initial underlier level of 2,862.96.

If a barrier event has occurred at any time during the measurement period, the return on your notes will be positive and at maturity you will receive \$1,020 for each \$1,000 stated principal amount of your notes (representing a return of 2%), regardless of the final underlier level (which is the closing level of the underlier on the determination date). **A barrier event may occur at any point during the measurement period; however, you will not receive the \$1,020 per \$1,000 stated principal amount on your note until maturity and you will receive such amount regardless of the final underlier level if a barrier event has occurred.**

If a barrier event has not occurred, the return on your notes will be zero or positive and will equal the absolute value of the underlier return, which is the increase or decrease in the final underlier level from the initial underlier level. For example, if the underlier return is either -10% or +10%, your return will be +10%.

At maturity, for each \$1,000 stated principal amount, (a) if a barrier event has occurred you will receive \$1,020 and (b) if a barrier event has not occurred, you will receive (i) \$1,000 *plus* (ii) \$1,000 *times* the absolute value of the underlier return (not less than \$1,000 and not more than \$1,197.50). **If the increase or decrease in the final underlier level from the initial underlier level exceeds the maximum return, you will only receive \$1,020.**

A purchaser of these notes in the secondary market should determine if a barrier event has already occurred. The occurrence of a barrier event could significantly affect both the secondary market trading price of these notes and the amount that a holder of the notes will receive at maturity. See page PS-5.

At maturity, for each \$1,000 stated principal amount of your notes you will receive an amount in cash equal to:

if a barrier event has not occurred, the *sum of* (a) \$1,000 *plus* (b) the *product* of \$1,000 *times* the absolute value of the underlier return, which sum will be no less than \$1,000 and no more than \$1,197.50; or
if a barrier event has occurred, \$1,020.

The notes are unsecured senior debt securities issued by Citigroup Global Markets Holdings Inc. and guaranteed by Citigroup Inc. All payments on the notes are subject to the credit risk of Citigroup Global Markets Holdings Inc. and Citigroup Inc. If Citigroup Global Markets Holdings Inc. and Citigroup Inc. default on their obligations, you may not receive any amount due under the notes. The notes will not be listed on any securities exchange and may have limited or no liquidity.

Investing in the notes involves risks not associated with an investment in conventional debt securities. See “Summary Risk Factors” beginning on page PS-10.

	Issue Price⁽¹⁾	Underwriting Discount⁽²⁾	Net Proceeds to Issuer
Per Note:	\$1,000.00*	\$14.70	\$985.30
Total:	\$54,880,000.00	\$806,736.00	\$54,073,264.00

(1) On the date of this pricing supplement, the estimated value of the notes is \$984.80 per note, which is less than the issue price. The estimated value of the notes is based on proprietary pricing models of Citigroup Global Markets Inc. (“CGMI”) and our internal funding rate. It is not an indication of actual profit to CGMI or other of our affiliates, nor is it an indication of the price, if any, at which CGMI or any other person may be willing to buy the notes from you at any time after issuance. See “Valuation of the Notes” in this pricing supplement.

(2) CGMI, an affiliate of the issuer, is the underwriter for the offering of the notes and is acting as principal. The total underwriting discount in the table above assumes that the underwriter receives an underwriting discount for each note sold in this offering. For more information on the distribution of the notes, see “Summary Information—Key Terms—Supplemental Plan of Distribution” in this pricing supplement. In addition to the underwriting discount, CGMI and its affiliates may profit from hedging activity related to this offering, even if the value of the notes declines. See “Use of Proceeds and Hedging” in the accompanying prospectus.

* The issue price will be \$985.30 for investors in certain fee-based advisory accounts, reflecting a foregone underwriting discount with respect to such notes. Please see “Supplemental plan of distribution” on page PS-5 of this pricing supplement.

Neither the Securities and Exchange Commission nor any state securities commission has approved or disapproved of the notes or determined that this pricing supplement and the accompanying product supplement, underlying supplement, prospectus supplement and prospectus is truthful or complete. Any representation to the contrary is a criminal offense.

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

The notes are part of the Medium-Term Senior Notes, Series N of Citigroup Global Markets Holdings Inc. This pricing supplement is a supplement to the documents listed below and should be read together with such documents, which are available at the following hyperlinks:

[**Product Supplement No. EA-03-06 dated April 7, 2017**](#)
[**Underlying Supplement No. 7 dated July 16, 2018**](#)
[**Prospectus Supplement and Prospectus each dated April 7, 2017**](#)

Citigroup Global Markets Inc.

Pricing Supplement No. 2018—USNCH1402 dated August 21, 2018

The issue price, underwriting discount and net proceeds listed above relate to the notes we sell initially. We may decide to sell additional notes after the date of this pricing supplement, at issue prices and with underwriting discounts and net proceeds that differ from the amounts set forth above. The return (whether positive or negative) on your

investment in notes will depend in part on the issue price you pay for such notes.

CGMI may use this pricing supplement in the initial sale of the notes. In addition, CGMI or any other affiliate of Citigroup Inc. may use this pricing supplement in a market-making transaction in a note after its initial sale.

Absolute Return Trigger S&P 500® Index-Linked Notes due August 5, 2020

INVESTMENT THESIS

For investors who:

- believe that a barrier event (described below) will not occur and that the underlier return or absolute value of the underlier return will be greater than 2% but not more than 19.75%;
- want limited exposure to (i) the underlier return if the final underlier level is *greater than* the initial underlier level or (ii) the absolute value of the underlier return if the final underlier level is *less than* the initial underlier level, in each case assuming a barrier event does not occur;
- are willing to forgo (i) exposure to such underlier return or absolute value of the underlier return if a barrier event occurs and in that case are willing to receive a 2% contingent return instead, (ii) any dividends that may be paid on the stocks included in the underlier and (iii) interest on the notes;
- are willing to accept that, if a barrier event has not occurred, the return on the notes will be limited to between 0%, on the lower end of the range, and 19.75%, on the higher end of the range, and, if a barrier event has occurred, the return on the notes will be limited to 2%; and
- are willing to accept the credit risk of Citigroup Global Markets Holdings Inc. and Citigroup Inc. and an investment that may have limited or no liquidity.

A barrier event will occur if, on any day during the measurement period, the closing level of the underlier (i) is less than the lower barrier of 80.25% of the initial underlier level or (ii) is more than the upper barrier of 119.75% of the initial underlier level.

DETERMINING THE CASH SETTLEMENT AMOUNT

At maturity, for each \$1,000 stated principal amount note you then hold, you will receive:

- if a barrier event has not occurred, the *sum of* (a) \$1,000 *plus* (b) the *product of* \$1,000 *times* the absolute value of the underlier return; or
- if a barrier event has occurred, \$1,020.

KEY TERMS

Issuer:	Citigroup Global Markets Holdings Inc., a wholly owned subsidiary of Citigroup Inc.
Guarantee:	All payments due on the notes are fully and unconditionally guaranteed by Citigroup Inc.
Underlier:	The S&P 500® Index (ticker symbol: "SPX")
Stated Principal Amount:	\$54,880,000 in the aggregate; each note will have a stated principal amount equal to \$1,000
Trade Date:	August 21, 2018
Settlement Date:	August 28, 2018. See "Supplemental plan of distribution" on page PS-5 in this pricing supplement for additional information.
Determination Date:	August 3, 2020. The determination date is subject to postponement if such date is not a scheduled trading day or if certain market disruption events occur
Maturity Date:	August 5, 2020

Initial Underlier Level:	2,862.96
Final Underlier Level:	The closing level of the underlier on the determination date
Underlier Return:	The <i>quotient</i> of (i) the final underlier level <i>minus</i> the initial underlier level <i>divided</i> by (ii) the initial underlier level, expressed as a positive or negative percentage
Absolute Underlier Return:	The absolute value of the underlier return, expressed as a percentage (e.g., a -10% or +10% underlier return will equal a +10% absolute underlier return)
Measurement Period:	The period from but excluding the trade date to and including the determination date, <i>excluding</i> any date or dates on which the calculation agent determines that a market disruption event occurs or is continuing or that the calculation agent determines is not a trading day
Barrier Event:	On any trading day during the measurement period, (i) the closing level of the underlier is below the lower barrier or (ii) the closing level of the underlier is above the upper barrier
Lower Barrier:	80.25% of the initial underlier level
Upper Barrier:	119.75% of the initial underlier level
CUSIP/ISIN:	17324CZT6 / US17324CZT60

PS-2

HYPOTHETICAL PAYMENT AT MATURITY

Hypothetical Final Underlier Level (as % of Initial Underlier Level)	Hypothetical Cash Settlement Amount (as % of Stated Principal Amount)	
	Barrier Event Has Not Occurred	Barrier Event Has Occurred
200.000%	N/A	102.000%
175.000%	N/A	102.000%
150.000%	N/A	102.000%
125.000%	N/A	102.000%
119.750%	119.750%	102.000%
110.000%	110.000%	102.000%
105.000%	105.000%	102.000%
102.000%	102.000%	102.000%
101.000%	101.000%	102.000%
100.500%	100.500%	102.000%
100.000%	100.000%	102.000%
99.500%	100.500%	102.000%
99.000%	101.000%	102.000%
98.000%	102.000%	102.000%
95.000%	105.000%	102.000%
90.000%	110.000%	102.000%
80.250%	119.750%	102.000%
70.000%	N/A	102.000%
60.000%	N/A	102.000%
50.000%	N/A	102.000%
25.000%	N/A	102.000%
0.000%	N/A	102.000%

RISKS

Please read the section titled “Summary Risk Factors” in this pricing supplement as well as the more detailed description of risks relating to an investment in the notes contained in the section “Risk Factors Relating to the Notes” beginning on page EA-6 in the accompanying product supplement. You should also carefully read the risk factors included in the accompanying prospectus supplement and in the documents incorporated by reference in the accompanying prospectus, including Citigroup Inc.’s most recent Annual Report on Form 10-K and any subsequent Quarterly Reports on Form 10-Q, which describe risks relating to the business of Citigroup Inc. more generally.

SUMMARY INFORMATION

The terms of the notes are set forth in the accompanying product supplement, prospectus supplement and prospectus, as supplemented by this pricing supplement. The accompanying product supplement, prospectus supplement and prospectus contain important disclosures that are not repeated in this pricing supplement. For example, certain events may occur that could affect your payment at maturity, such as market disruption events and other events affecting the underlier. These events and their consequences are described in the accompanying product supplement in the sections “Description of the Notes—Certain Additional Terms for Notes Linked to an Underlying Index—Consequences of a Market Disruption Event; Postponement of a Valuation Date” and “—Discontinuance or Material Modification of an Underlying Index,” and not in this pricing supplement. The accompanying underlying supplement contains important disclosures regarding the underlier that are not repeated in this pricing supplement. It is important that you read the accompanying product supplement, underlying supplement, prospectus supplement and prospectus together with this pricing supplement in connection with your investment in the notes. Certain terms used but not defined in this pricing supplement are defined in the accompanying product supplement.

Key Terms

Issuer: Citigroup Global Markets Holdings Inc., a wholly owned subsidiary of Citigroup Inc.

Guarantee: all payments due on the notes are fully and unconditionally guaranteed by Citigroup Inc.

Underlier: the S&P 500[®] Index (ticker symbol: “SPX”), as maintained by S&P Dow Jones Indices LLC (the “underlier sponsor”). The underlier is referred to as the “underlying index” and the underlier sponsor is referred to as the “underlying index publisher” in the accompanying product supplement.

Stated principal amount: each note will have a stated principal amount of \$1,000; \$54,880,000 in the aggregate for all the offered notes

Purchase at amount other than the stated principal amount: the amount we will pay you at the 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 stated principal amount and hold them to the 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 stated principal amount. See “Summary Risk Factors — If You Purchase Your Notes at a Premium to the Stated Principal Amount, the Return on Your Investment Will Be Lower Than the Return on Notes

Purchased at the Stated Principal Amount and the Impact of Certain Key Terms of the Notes Will be Negatively Affected” on page PS-13 of this pricing supplement.

Cash settlement amount (paid on the maturity date): on the maturity date, for each \$1,000 stated principal amount of notes you then hold, we will pay you an amount in cash equal to:

· if a barrier event has not occurred, the *sum* of (i) \$1,000 *plus* (ii) the *product* of \$1,000 *times* the absolute underlier return; or

· if a barrier event has occurred, the *sum* of (i) \$1,000 *plus* (ii) the *product* of \$1,000 *times* the contingent return.

Initial underlier level: 2,862.96

Final underlier level: the closing level of the underlier on the determination date, except in the limited circumstances described under “Description of the Notes — Certain Additional Terms for Notes Linked to an Underlying Index — Discontinuance or Material Modification of an Underlying Index” on page EA-24 of the accompanying product supplement and subject to adjustment as provided under “Description of the Notes — Certain Additional Terms for Notes Linked to an Underlying Index — Determining the Closing Level” and “Description of the Notes — Certain Additional Terms for Notes Linked to an Underlying Index — Consequences of a Market Disruption Event; Postponement of a Valuation Date” on page EA-20 of the accompanying product supplement.

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 positive or negative percentage

Absolute underlier return: the absolute value of the underlier return, expressed as a percentage (e.g., a -10% or +10% underlier return will equal a +10% absolute underlier return)

Contingent return: 2%

Measurement period: the period from but excluding the trade date to and including the determination date, *excluding* any date or dates on which the calculation agent determines that a market disruption event occurs or is continuing or that the calculation agent determines is not a trading day

Barrier event: on any trading day during the measurement period, (i) the closing level of the underlier is below the lower barrier or (ii) the closing level of the underlier is above the upper barrier.

Lower barrier: 80.25% of the initial underlier level

Upper barrier: 119.75% of the initial underlier level

Trade date: August 21, 2018. The trade date is referred to as the “pricing date” in the accompanying product supplement.

PS-4

Original issue date (settlement date): August 28, 2018. See “Supplemental plan of distribution” below for additional information.

Determination date: August 3, 2020. The determination date is referred to as the “valuation date” in the accompanying product supplement and is subject to postponement if such date is not a scheduled trading day or if certain market disruption events occur, as described under “Description of the Notes — Certain Additional Terms for Notes Linked to an Underlying Index — Consequences of a Market Disruption Event; Postponement of a Valuation Date” on page EA-20 of the accompanying product supplement.

Maturity date: August 5, 2020

Considerations for Secondary Market Purchasers: A purchaser of these notes in the secondary market should determine if a barrier event has already occurred. The occurrence of a barrier event could affect both the secondary market trading price of these notes after a secondary market purchase and the amount a secondary market purchaser will receive at maturity. In order to determine if a barrier event has occurred, you should determine if, on any date from the day after the trade date to the date of your purchase, the closing level of the underlier was less than 80.25% of the initial underlier level or the closing level of the underlier was greater than 119.75% of the initial underlier level. Certain financial websites make index levels publicly available, which can be helpful when determining whether a barrier event may have occurred. If you would like assistance in determining whether a barrier event has occurred, please call Citi Structured Investment Sales at (212) 723-7005.

No interest: the notes will not bear interest

No listing: the notes will not be listed on any securities exchange or interdealer quotation system

No redemption: the notes will not be subject to redemption before maturity

Business day: as described under “Description of the Notes — General” on page EA-19 in the accompanying product supplement

Scheduled trading day: as described under “Description of the Notes — Certain Additional Terms for Notes Linked to an Underlying Index — Consequences of a Market Disruption Event; Postponement of a Valuation Date” on pages EA-22 and EA-23 of the accompanying product supplement.

Trading day: a scheduled trading day on which a market disruption event has not occurred

Supplemental plan of distribution: Citigroup Global Markets Holdings Inc. expects to sell to CGMI, and CGMI expects to purchase from Citigroup Global Markets Holdings Inc., the aggregate stated principal amount of the offered notes specified on the front cover of this pricing supplement. CGMI proposes initially to offer the notes to the public at the issue price set forth on the cover page of this pricing supplement, and to certain unaffiliated securities dealers at such price less a concession not in excess of 1.47% of the stated principal amount. The issue price for notes purchased by certain fee-based advisory accounts will be 98.53% of the stated principal amount, which reflects a foregone underwriting discount with respect to such notes (i.e., the underwriting discount specified on the cover of this pricing supplement with respect to such notes is 0.00%). In addition to the underwriting discount, CGMI and its affiliates may profit from hedging activity related to this offering, even if the value of the notes declines. See “Use of Proceeds and Hedging” in the accompanying prospectus.

CGMI is an affiliate of ours. Accordingly, this offering will conform with the requirements addressing conflicts of interest when distributing the securities of an affiliate set forth in Rule 5121 of the Financial Industry Regulatory Authority. Client accounts over which Citigroup Inc. or its subsidiaries have investment discretion will not be permitted to purchase the notes, either directly or indirectly, without the prior written consent of the client.

Secondary market sales of securities typically settle two business days after the date on which the parties agree to the sale. Because the settlement date for the notes is more than two business days after the trade date, investors who wish to sell the notes at any time prior to the second business day preceding the original issue date will be required to specify an alternative settlement date for the secondary market sale to prevent a failed settlement. Investors should consult their own investment advisors in this regard.

See “Plan of Distribution; Conflicts of Interest” in the accompanying product supplement and “Plan of Distribution” in each of the accompanying prospectus supplement and prospectus for additional information.

A portion of the net proceeds from the sale of the notes will be used to hedge our obligations under the notes. We have hedged our obligations under the notes through CGMI or other of our affiliates, or through a dealer participating in this offering or its affiliates. CGMI or such other of our affiliates or such dealer or its affiliates may profit from this hedging activity even if the value of the notes declines. This hedging activity could affect the closing level of the underlier and, therefore, the value of and your return on the notes. For additional information on the ways in which our counterparties may hedge our obligations under the notes, see “Use of Proceeds and Hedging” in the accompanying prospectus.

Prohibition of Sales to EEA Retail Investors

The notes may not be offered, sold or otherwise made available to any retail investor in the European Economic Area. For the purposes of this provision:

- (a) the expression “retail investor” means a person who is one (or more) of the following:
 - (i) a retail client as defined in point (11) of Article 4(1) of Directive 2014/65/EU (as amended, “MiFID II”); or
 - (ii) a customer within the meaning of Directive 2002/92/EC, where that customer would not qualify as a professional client as defined in point (10) of Article 4(1) of MiFID II; or

PS-5

(iii) not a qualified investor as defined in Directive 2003/71/EC; and

(b) the expression “offer” includes the communication in any form and by any means of sufficient information on the terms of the offer and the notes offered so as to enable an investor to decide to purchase or subscribe the notes.

ERISA: as described under “Benefit Plan Investor Considerations” on pages EA-48 and EA-49 in the accompanying product supplement.

Calculation Agent: CGMI

CUSIP: 17324CZT6

ISIN: US17324CZT60

PS-6

HYPOTHETICAL EXAMPLES

The table and chart below 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 various hypothetical underlier levels during the measurement period including on the determination date could have on the cash settlement amount at maturity.

The table and chart below are based on a range of final underlier levels that are entirely hypothetical; no one can predict what the underlier level will be on any day during the measurement period, and no one can predict what the final underlier level will be on the determination date. The underlier has been highly volatile in the past — meaning that the underlier level has changed considerably in relatively short periods — and its performance cannot be predicted for any future period. Investors in the notes will not receive any dividends on the stocks that constitute the underlier. The table and chart below do not show any effect of lost dividend yield over the term of the notes. See “Summary Risk Factors—Investing in the Notes Is Not Equivalent to Investing in the Underlier or the Stocks that Constitute the Underlier” below.

The information in the table and chart below reflects hypothetical returns on the notes assuming that they are purchased on the original issue date at the stated principal amount and held to the maturity date. If you sell your notes in a secondary market prior to the maturity date, your return will depend upon the value of your notes at the time of sale, which may be affected by a number of factors that are not reflected in the table or chart below such as interest rates, the volatility of the underlier and our and Citigroup Inc.’s creditworthiness. Please read “Summary Risk Factors—The Value of the Notes Prior to Maturity Will Fluctuate Based on Many Unpredictable Factors” in this pricing supplement. It is likely that any secondary market price for the notes will be less than the issue price.

The information in the table and chart also reflects the key terms and assumptions in the box below.

Key Terms and Assumptions

Stated principal amount	\$1,000
Upper barrier	119.75% of the initial underlier level
Lower barrier	80.25% of the initial underlier level
Contingent return	2%

Neither a market disruption event nor a non-scheduled trading day occurs during the measurement period, including on the originally scheduled determination date

No change in or affecting any of the stocks comprising the underlier or the method by which the underlier sponsor calculates the underlier

Notes purchased on original issue date at the stated principal amount and held to the maturity date

The actual performance of the underlier over the life of your notes, as well as the amount payable at maturity may bear little relation to the hypothetical examples shown below or to the historical underlier levels shown elsewhere in this pricing supplement. For information about the historical levels of the underlier during recent periods, see “The Underlier — Historical Closing Levels of 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 middle column represent the hypothetical cash settlement amounts, based on the corresponding hypothetical final underlier level (expressed as a percentage of the initial underlier level), assuming that **a barrier event does not occur** (i.e., the closing level of the underlier has not decreased below the lower barrier or increased above the upper barrier on any trading day during the measurement period), and are expressed as percentages of the stated principal amount of a note (rounded to the nearest one-thousandth of a percent). The amounts in the right column represent the hypothetical cash settlement amounts, based on the corresponding hypothetical final underlier level (expressed as a percentage of the initial underlier level), assuming that **a barrier event occurs** (i.e., the closing level of the underlier has decreased below the lower barrier or has increased above the upper barrier on one or more trading days during the measurement period), and are expressed as percentages of the stated principal amount of a note (rounded to the nearest one-thousandth of a percent). Thus, a hypothetical cash settlement amount of 100.000% means that the value of the cash payment that we would deliver for each \$1,000 of the outstanding stated principal amount of the notes on the maturity date would equal 100.000% of the stated principal amount of a note, based on the corresponding hypothetical final underlier level (expressed as a percentage of the initial underlier level) and the assumptions noted above.

PS-7

Hypothetical Final Underlier Level (as Percentage of Initial Underlier Level)	Hypothetical Cash Settlement Amount (as Percentage of Stated Principal Amount)	
	Barrier Event Has Not Occurred	Barrier Event Has Occurred
200.000%	N/A	102.000%
175.000%	N/A	102.000%
150.000%	N/A	102.000%
125.000%	N/A	102.000%
119.750%	119.750%	102.000%
110.000%	110.000%	102.000%
105.000%	105.000%	102.000%
102.000%	102.000%	102.000%
101.000%	101.000%	102.000%
100.500%	100.500%	102.000%
100.000%	100.000%	102.000%
99.500%	100.500%	102.000%
99.000%	101.000%	102.000%
98.000%	102.000%	102.000%
95.000%	105.000%	102.000%
90.000%	110.000%	102.000%
80.250%	119.750%	102.000%
70.000%	N/A	102.000%
60.000%	N/A	102.000%
50.000%	N/A	102.000%
25.000%	N/A	102.000%
0.000%	N/A	102.000%

If, for example, **a barrier event has occurred** and the final underlier level were determined to be 150.000% of the initial underlier level, the cash settlement amount that we would deliver on your notes at maturity would be 102.000% for each \$1,000 stated principal amount of your notes, as shown in the table above. Additionally, if the final underlier level were determined to be 50.000% of the initial underlier level, the cash settlement amount that we would deliver on your notes at maturity would be 102.000% for each \$1,000 stated principal amount of your notes, as shown in the table above.

If, for example, **a barrier event has not occurred** and the final underlier level were determined to be 90.000% of the initial underlier level, the absolute underlier return would be 10.000% and the cash settlement amount that we would deliver on your notes at maturity would be 110.000% for each \$1,000 stated principal amount of your notes, as shown in the table above. However, you will benefit from the absolute underlier return only if a barrier event has not occurred. Because a barrier event will occur if, on any trading day during the measurement period (including the determination date), the closing level of the underlier is below the lower barrier (80.250% of the initial underlier level) or above the upper barrier (119.750% of the initial underlier level), the cash settlement amount that we will deliver at maturity if a barrier event has not occurred will be limited to between 100.000% and 119.750% (representing a return of between 0.000% and 19.750%) for each \$1,000 stated principal amount. As a result, you would not benefit from a final underlier level on the determination date (or a closing level of the underlier on any other trading day during the measurement period) that is above the upper barrier or below the lower barrier. In fact, a final underlier level on the determination date (or a closing level of the underlier on any other trading day during the measurement period) that is

above the upper barrier or below the lower barrier will cause the cash settlement amount that we will deliver at maturity to be limited to 102.000% (representing a contingent return of 2.000%) for each \$1,000 stated principal amount. Further, you should be aware that, if a barrier event has not occurred, the cash settlement amount that we will deliver at maturity will be less than 102.000% (representing less than the contingent return of 2.000%) for each \$1,000 stated principal amount if the final underlier level is less than 102.000%, but greater than 98.000%, of the initial underlier level, as shown in the table above.

The following chart also shows a graphical illustration of the hypothetical cash settlement amounts (expressed as a percentage of the stated principal amount of your notes) that we would pay on your notes on the maturity date, 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, if a barrier event occurs at any time during the measurement period, any hypothetical final underlier level (expressed as a percentage of the initial underlier level) would result in a hypothetical payment amount of 102.000% for each \$1,000 stated principal amount of the note (the horizontal line that crosses the 102.000% marker on the vertical axis). The chart also shows that, if a barrier event does not occur at any time during the measurement period, any hypothetical final underlier level between 80.250% and 119.750% (expressed as a percentage of the initial underlier level) (the section between the 80.250% and 119.750% markers on the horizontal axis) would result in a hypothetical payment amount that is greater than or equal to 100.000%, but less than or equal to 119.750%, for each \$1,000 stated principal amount of the note (the section on or above the 100.000% marker on the vertical axis but on or below the 119.750% marker on the vertical axis).

PS-8

The cash settlement amounts shown above are entirely hypothetical; they are based on levels of the underlier that may not be achieved on the determination date. The actual cash settlement amount you receive on the maturity date may bear little relation to the hypothetical cash settlement amounts shown above, and these amounts should not be viewed as an indication of the financial return on an investment in the notes. The actual market value of your notes on the maturity date or at any other time, including any time you may wish to sell your notes, may bear little relation to the hypothetical cash settlement amounts shown above, and these amounts should not be viewed as an indication of the financial return on an investment in the offered notes. The hypothetical cash settlement amounts on notes held to the maturity date in the examples above assume you purchased your notes at their stated principal amount and have not been adjusted to reflect the actual issue price you pay for your notes. The return on your investment (whether positive or negative) in your notes will be affected by the amount you pay for your notes. If you purchase your notes for a price other than the stated principal amount, the return on your investment will differ from, and may be significantly lower than, the hypothetical returns suggested by the above examples. Please read “Summary Risk Factors — The Value of the Notes Prior to Maturity Will Fluctuate Based on Many Unpredictable Factors” on page PS-12 of this pricing supplement.

We cannot predict the actual final underlier level or what the value of your notes will be on any particular day, nor can we predict the relationship between the underlier level and the value of your notes at any time prior to the maturity date. The actual amount that you will receive at maturity and the return on the notes will depend on the actual closing levels of the underlier during the measurement period and the actual final underlier level determined by the calculation agent as described above. Moreover, the assumptions on which the hypothetical returns are based may turn out to be inaccurate. Consequently, the amount of cash to be paid in respect of your notes on the maturity date may be very different from the information reflected in the table and chart above.

SUMMARY RISK FACTORS

An investment in the notes is significantly riskier than an investment in conventional debt securities. The notes are subject to all of the risks associated with an investment in our conventional debt securities (guaranteed by Citigroup Inc.), including the risk that we and Citigroup Inc. may default on our obligations under the notes, and are also subject to risks associated with the underlier. Accordingly, the notes are suitable only for investors who are capable of understanding the complexities and risks of the notes. You should consult your own financial, tax and legal advisors as to the risks of an investment in the notes and the suitability of the notes in light of your particular circumstances.

The following is a summary of certain key risk factors for investors in the notes. You should read this summary together with the more detailed description of risks relating to an investment in the notes contained in the section “Risk Factors Relating to the Notes” beginning on page EA-6 in the accompanying product supplement. You should also carefully read the risk factors included in the accompanying prospectus supplement and in the documents incorporated by reference in the accompanying prospectus, including Citigroup Inc.’s most recent Annual Report on Form 10-K and any subsequent Quarterly Reports on Form 10-Q, which describe risks relating to the business of Citigroup Inc. more generally.

You May Not Receive A Positive Return on Your Investment in the Notes

The return on the notes, if any, at maturity is linked to the performance of the underlier and depends on whether a barrier event occurs during the measurement period. If a barrier event occurs during the measurement period, you will receive a payment at maturity equal to the stated principal amount of your notes *plus* an amount equal to the contingent return of 2% of the stated principal amount. If a barrier event does not occur, the return on your investment in the notes may be zero. In any event, the return on your investment in the notes may be less than the amount that would be paid on conventional debt securities of ours of comparable maturity. Moreover, if you receive the absolute underlier return on the notes, the overall return on the notes (the effective yield to maturity) may still be less than the amount that would be paid on conventional debt securities of ours of comparable maturity. The notes have been designed for investors who are willing to forgo market interest rates in exchange for a return, if any, based on the performance of the underlier.

The Appreciation Potential is Limited

The appreciation potential of the notes is limited by the upper barrier and lower barrier. If a barrier event occurs during the measurement period, you will receive a payment at maturity equal to the stated principal amount of your notes *plus* an amount equal to the contingent return of 2% of the stated principal amount. Therefore, you will not benefit from any positive underlier return above the upper barrier or negative underlier return below the lower barrier.

If a barrier event does not occur during the measurement period, you will receive a payment at maturity equal to the absolute value of the underlier return. Therefore, your payment at maturity will be limited to between 100%, on the lower end of the range, and 119.75%, on the higher end of the range, based on the lower barrier and upper barrier.

If a Barrier Event Occurs, You Will Receive the Stated Principal Amount of Your Notes Plus an Amount Equal to the Contingent Return of 2% of the Stated Principal Amount, Regardless of the Final Underlier Level

If a barrier event occurs on any trading day during the measurement period, you will receive the stated principal amount of your notes *plus* an amount equal to the contingent return of 2% of the stated principal amount, regardless of the final underlier level.

You May Receive Less Than the Contingent Return and Potentially No Return on Your Investment in the Notes

If a barrier event does not occur during the measurement period and the underlier appreciates or depreciates by less than 2% from the trade date to the determination date, you will receive a return on the notes that is less than the contingent return, and if the underlier does not appreciate or depreciate at all, you will not receive any positive return on your investment in the notes. As the notes do not pay any interest, there is no assurance that your total return at maturity on the notes will be as great as could have been achieved on conventional debt securities of ours of comparable maturity.

The Return on Your Notes May Change Significantly Despite Only a Small Change in the Underlier Level

Your ability to participate in any change in the level of the underlier over the life of your notes will be limited and the return on your notes may change significantly despite only a small change in the underlier level. If a barrier event occurs and the final underlier level is greater than the initial underlier level, your return on the notes is limited to the contingent return no matter how much the final underlier level may increase above the initial underlier level. This means that, assuming an upper barrier of 119.75% of the initial underlier level, while an increase in the level of the underlier of 19.75% will not cause a barrier event to occur, an increase of greater than 19.75% will cause a barrier event to occur and your return on the notes will be limited to the contingent return. Accordingly, if a barrier event occurs and the underlier return is positive, the amount payable for each of your notes may be significantly less than it would have been had you invested directly in the stocks included in the underlier.

Similarly, if a barrier event occurs and the final underlier level is less than the initial underlier level, your return will be limited to the contingent return and you will not receive the benefit of the absolute underlier return. This means that, assuming a lower barrier of 80.25% of the initial underlier level, while a decrease in the level of the underlier of 19.75% will not cause a barrier event to occur, a decrease of greater than 19.75% will cause a barrier event to occur and your return on the notes will be limited to the contingent return. Accordingly, if a barrier event occurs and the

underlier return is negative, you will not receive the benefit of the absolute underlier return.

PS-10

Further, if a barrier event does not occur and the final underlier level is less than the initial underlier level but greater than 98% of the initial underlier level, your return on the notes will be less than the contingent return notwithstanding the benefit from the absolute underlier return.

The Notes Do Not Pay Interest

Unlike conventional debt securities, the notes do not pay interest or any other amounts prior to maturity. You should not invest in the notes if you seek current income during the term of the notes.

Sale of the Notes Prior to Maturity May Result in a Loss of Principal

You will be entitled to receive at least the full stated principal amount of your notes, subject to the credit risk of Citigroup Global Markets Holdings Inc. and Citigroup Inc., only if you hold the notes to maturity. The value of the notes may fluctuate during the term of the notes, and if you are able to sell your notes prior to maturity, you may receive less than the full stated principal amount of your notes.

Investing in the Notes Is Not Equivalent to Investing in the Underlier or the Stocks that Constitute the Underlier

You will not have voting rights, rights to receive dividends or other distributions or any other rights with respect to the stocks that constitute the underlier. As of August 21, 2018, the average dividend yield of the stocks that constitute the underlier was approximately 1.82% per year. While it is impossible to know the future dividend yield of the stocks that constitute the underlier, if this average dividend yield were to remain constant for the term of the notes, you would be forgoing an aggregate yield of approximately 3.56% (assuming no reinvestment of dividends) by investing in the notes instead of investing directly in the stocks that constitute the underlier or in another investment linked to the underlier that provides for a pass-through of dividends. The payment scenarios described in this pricing supplement do not show any effect of lost dividend yield over the term of the notes.

The Notes Are Subject to the Credit Risk of Citigroup Global Markets Holdings Inc. and Citigroup Inc.

If we default on our obligations under the notes and Citigroup Inc. defaults on its guarantee obligations, you may not receive anything owed to you under the notes.

The Notes Will Not Be Listed on any Securities Exchange and You May Not Be Able to Sell Them Prior to Maturity

The notes will not be listed on any securities exchange. Therefore, there may be little or no secondary market for the notes. CGMI currently intends to make a secondary market in relation to the notes and to provide an indicative bid price for the notes on a daily basis. Any indicative bid price for the notes provided by CGMI will be determined in CGMI's sole discretion, taking into account prevailing market conditions and other relevant factors, and will not be a representation by CGMI that the notes can be sold at that price, or at all. CGMI may suspend or terminate making a market and providing indicative bid prices without notice, at any time and for any reason. If CGMI suspends or terminates making a market, there may be no secondary market at all for the notes because it is likely that CGMI will be the only broker-dealer that is willing to buy your notes prior to maturity. Accordingly, an investor must be prepared to hold the notes until maturity.

The Estimated Value of the Notes on the Trade Date, Based on CGMI's Proprietary Pricing Models and Our Internal Funding Rate, Is Less than the Issue Price

The difference is attributable to certain costs associated with selling, structuring and hedging the notes that are included in the issue price. These costs include (i) the selling concessions paid in connection with the offering of the notes, (ii) hedging and other costs incurred by us and our affiliates in connection with the offering of the notes and (iii) the expected profit (which may be more or less than actual profit) to CGMI or other of our affiliates in connection with hedging our obligations under the notes. These costs adversely affect the economic terms of the notes because, if they were lower, the economic terms of the notes would be more favorable to you. The economic terms of the notes are also likely to be adversely affected by the use of our internal funding rate, rather than our secondary market rate, to price the notes. See "The Estimated Value of the Notes Would Be Lower if It Were Calculated Based on Our Secondary Market Rate" below.

The Estimated Value of the Notes Was Determined for Us by Our Affiliate Using Proprietary Pricing Models

CGMI derived the estimated value disclosed on the cover page of this pricing supplement from its proprietary pricing models. In doing so, it may have made discretionary judgments about the inputs to its models, such as the volatility of the underlier, dividend yields on the stocks that constitute the underlier and interest rates. CGMI's views on these inputs may differ from your or others' views, and as an underwriter in this offering, CGMI's interests may conflict with yours. Both the models and the inputs to the models may prove to be wrong and therefore not an accurate reflection of the value of the notes. Moreover, the estimated value of the notes set forth on the cover page of this pricing supplement may differ from the value that we or our affiliates may determine for the notes for other purposes, including for accounting purposes. You should not invest in the notes because of the estimated value of the notes. Instead, you should be willing to hold the notes to maturity irrespective of the initial estimated value.

The Estimated Value of the Notes Would Be Lower if It Were Calculated Based on Our Secondary Market Rate

The estimated value of the notes included in this pricing supplement is calculated based on our internal funding rate, which is the rate at which we are willing to borrow funds through the issuance of the notes. Our internal funding rate is generally lower than our secondary market rate, which is the rate that CGMI will use in determining the value of the notes for purposes of any purchases of the notes from you in the secondary market. If the estimated value included in this pricing supplement were based on our secondary market rate, rather than our internal funding rate, it would likely

PS-11

be lower. We determine our internal funding rate based on factors such as the costs associated with the notes, which are generally higher than the costs associated with conventional debt securities, and our liquidity needs and preferences. Our internal funding rate is not an interest rate that we will pay to investors in the notes, which do not bear interest.

Because there is not an active market for traded instruments referencing our outstanding debt obligations, CGMI determines our secondary market rate based on the market price of traded instruments referencing the debt obligations of Citigroup Inc., our parent company and the guarantor of all payments due on the notes, but subject to adjustments that CGMI makes in its sole discretion. As a result, our secondary market rate is not a market-determined measure of our creditworthiness, but rather reflects the market's perception of our parent company's creditworthiness as adjusted for discretionary factors such as CGMI's preferences with respect to purchasing the notes prior to maturity.

The Estimated Value of the Notes Is Not an Indication of the Price, if Any, at Which CGMI or Any Other Person May Be Willing to Buy the Notes From You in the Secondary Market

Any such secondary market price will fluctuate over the term of the notes based on the market and other factors described in the next risk factor. Moreover, unlike the estimated value included in this pricing supplement, any value of the notes determined for purposes of a secondary market transaction will be based on our secondary market rate, which will likely result in a lower value for the notes than if our internal funding rate were used. In addition, any secondary market price for the notes will be reduced by a bid-ask spread, which may vary depending on the aggregate stated principal amount of the notes to be purchased in the secondary market transaction, and the expected cost of unwinding related hedging transactions. As a result, it is likely that any secondary market price for the notes will be less than the issue price.

The Value of the Notes Prior to Maturity Will Fluctuate Based on Many Unpredictable Factors

The value of your notes prior to maturity will fluctuate based on the level and volatility of the underlier and a number of other factors, including the price and volatility of the stocks that constitute the underlier, the dividend yields on the stocks that constitute the underlier, interest rates generally, the time remaining to maturity and our and Citigroup Inc.'s creditworthiness, as reflected in our secondary market rate. Changes in the level of the underlier may not result in a comparable change in the value of your notes. You should understand that the value of your notes at any time prior to maturity may be significantly less than the issue price.

If the Level of the Underlier Changes, the Market Value of Your Notes May Not Change in the Same Manner

Your notes may trade quite differently from the performance of the underlier. Changes in the level of the underlier may not result in a comparable change in the market value of your notes. We discuss some of the reasons for this disparity under “— The Value of the Notes Prior to Maturity Will Fluctuate Based on Many Unpredictable Factors” above.

Immediately Following Issuance, Any Secondary Market Bid Price Provided by CGMI, and the Value That Will Be Indicated on Any Brokerage Account Statements Prepared by CGMI or Its Affiliates, Will Reflect a Temporary Upward Adjustment

The amount of this temporary upward adjustment will steadily decline to zero over the temporary adjustment period. See “Valuation of the Notes” in this pricing supplement.

Our Offering of the Notes Does Not Constitute a Recommendation of the Underlier

The fact that we are offering the notes does not mean that we believe that investing in an instrument linked to the underlier is likely to achieve favorable returns. In fact, as we are part of a global financial institution, our affiliates may have positions (including short positions) in the stocks that constitute the underlier or in instruments related to the underlier or such stocks and may publish research or express opinions, that in each case are inconsistent with an investment linked to the underlier. These and other activities of our affiliates may affect the level of the underlier in a way that has a negative impact on your interests as a holder of the notes.

The Level of the Underlier May Be Adversely Affected by Our or Our Affiliates’ Hedging and Other Trading Activities

We have hedged our obligations under the notes through CGMI or other of our affiliates, or through a dealer participating in this offering or its affiliates, who have taken positions directly in the stocks that constitute the underlier and other financial instruments related to the underlier or such stocks and may adjust such positions during the term of the notes. Our affiliates also trade the stocks that constitute the underlier and other financial instruments related to the underlier or such stocks on a regular basis (taking long or short positions or both), for their accounts, for other accounts under their management or to facilitate transactions on behalf of customers. Any dealer participating in the offering of the notes or its affiliates may engage in similar activities. These activities could affect the level of the underlier in a way that negatively affects the value of the notes. They could also result in substantial returns for us or our affiliates or any dealer or its affiliates while the value of the notes declines. If the dealer from which you purchase notes is to conduct hedging activities for us in connection with the notes, that dealer may profit in connection with such hedging activities and such profit, if any, will be in addition to the compensation that the dealer receives for the sale of the notes to you. You should be aware that the potential to earn fees in connection with hedging activities may create a further incentive for the dealer to sell the notes to you in addition to the compensation they would receive for the sale of the notes.

We and Our Affiliates May Have Economic Interests That Are Adverse to Yours as a Result of Our Affiliates' Business Activities

PS-12

Our affiliates may currently or from time to time engage in business with the issuers of the stocks that constitute the underlier, including extending loans to, making equity investments in or providing advisory services to such issuers. In the course of this business, we or our affiliates may acquire non-public information about such issuers, which we will not disclose to you. Moreover, if any of our affiliates is or becomes a creditor of any such issuer, they may exercise any remedies against such issuer that are available to them without regard to your interests. Any dealer participating in the offering of the notes or its affiliates may engage in similar activities.

The Calculation Agent, Which Is an Affiliate of Ours, Will Make Important Determinations With Respect to the Notes

If certain events occur, such as market disruption events or the discontinuance of the underlier, CGMI, as calculation agent, will be required to make discretionary judgments that could significantly affect your payment at maturity. In making these judgments, the calculation agent's interests as an affiliate of ours could be adverse to your interests as a holder of the notes.

Adjustments to the Underlier May Affect the Value of Your Notes

The underlier sponsor may add, delete or substitute the stocks that constitute the underlier or make other methodological changes that could affect the level of the underlier. The underlier sponsor may discontinue or suspend calculation or publication of the underlier at any time without regard to your interests as holders of the notes.

We May Sell an Additional Aggregate Stated Principal Amount of the Notes at a Different Issue Price

At our sole option, we may decide to sell an additional aggregate stated principal amount of the notes subsequent to the date of this pricing supplement. The issue price of the notes in the subsequent sale may differ substantially (higher or lower) from the original issue price you paid as provided on the cover of this pricing supplement.

If You Purchase Your Notes at a Premium to the Stated Principal Amount, the Return on Your Investment Will Be Lower Than the Return on Notes Purchased at the Stated Principal 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 stated principal amount of the notes, then the return on your investment in such notes held to the maturity date will differ from, and may be substantially less than, the return on notes purchased at the

stated principal amount. If you purchase your notes at a premium to the stated principal amount and hold them to the 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 stated principal amount or a discount to the stated principal amount.

PS-13

THE UNDERLIER

The S&P 500[®] Index consists of common stocks of 500 issuers selected to provide a performance benchmark for the large capitalization segment of the U.S. equity markets. Effective March 10, 2017, company additions to the S&P 500[®] Index should have an unadjusted company market capitalization of \$6.1 billion or more (an increase from the previous requirement of an unadjusted company market capitalization of \$5.3 billion or more). The S&P 500[®] Index is calculated and maintained by S&P Dow Jones Indices LLC. The S&P 500[®] Index is reported by Bloomberg L.P. under the ticker symbol “SPX.”

As of July 31, 2017, if a S&P 500[®] Index constituent reorganizes into a multiple share class line structure, that company will be reviewed for continued inclusion in the S&P 500[®] Index at the discretion of the S&P Index Committee.

“Standard & Poor’s,” “S&P” and “S&P 500” trademarks of Standard & Poor’s Financial Services LLC and have been licensed for use by Citigroup Inc. and its affiliates. For more information, see “Equity Index Descriptions—The S&P U.S. Indices—License Agreement” in the accompanying underlying supplement.

Please refer to the section “Equity Index Descriptions—The S&P U.S. Indices—The S&P 500[®] Index” in the accompanying underlying supplement for additional information. Additional information is available on the underlier sponsor’s website (including information regarding (i) the underlier’s top ten constituents and (ii) the underlier’s sector weightings). We are not incorporating by reference the website or any material it includes in this document. Neither the issuer nor CGMI makes any representation that such publicly available information regarding the underlier is accurate or complete.

Historical Closing Levels of the Underlier

The closing level of the underlier has fluctuated in the past and may, in the future, experience significant fluctuations. Any historical upward or downward trend in the closing level of the underlier during the period shown below is not an indication that the underlier is more or less likely to increase or decrease at any time during the life of your notes.

You should not take the historical levels of the underlier as an indication of the future performance of the underlier. We cannot give you any assurance that the future performance of the underlier will result in your receiving an amount greater than the stated principal amount of your notes on the maturity date.

Neither we nor any of our affiliates make any representation to you as to the performance of the underlier. The actual performance of the underlier over the life of the notes, as well as the cash settlement amount, may bear little relation to the historical levels shown below.

The graph below shows the closing level of the underlier for each day such level was available from January 2, 2013 to August 21, 2018. We obtained the closing levels from Bloomberg L.P., without imps and provides additional value to the customer in their research; and

-

having a global sales, marketing and distribution team reaches directly to customers and builds strong relationships with them.

We seek to grow this range of products through a combination of organic growth driven by internal development of new products, direct marketing, global sales and distribution channel expansion, and the acquisition of products. We use acquisitions to expand our product offerings because we believe we can use our well-established brands and distribution channels to accelerate the growth of these acquired products. Our operational strategy aims to continuously improve our operational efficiency across the Company, including the newly acquired companies, therefore contributing to profit improvement.

Corporate Information

We were incorporated under the laws of the State of Delaware on September 8, 2000. Our principal executive offices are located at 84 October Hill Road, Holliston, Massachusetts. Our telephone number is (508) 893-8999. We maintain a web site at <http://www.harvardbioscience.com>. The reference to our web site is intended to be an inactive textual reference only. The information contained on, or that can be accessed through, our web site is not a part of this information statement.

“Harvard” is a registered trademark of Harvard University. The marks “Harvard Apparatus” and “Harvard Bioscience” are being used pursuant to a license agreement entered into in December 2002 between us and Harvard University.

Table of Contents

Common Stock

As discussed below under the heading “Securities We May Offer,” we may issue shares of our common stock from time to time. Holders of our common stock are entitled to one vote for each share held of record on all matters submitted to a vote of shareholders; provided that Holders of common stock are not entitled to vote on any amendment to our Second Amended and Restated Certificate of Incorporation, or our “Charter”, that changes the powers, preferences, rights or other terms of one or more series of undesignated preferred stock if the holders of the affected series are entitled to vote, separately or together, with the holders of one or more other such series, on such amendment pursuant to the Charter or Delaware General Corporation Law. Our Board currently has eight (8) members. Our Charter provides that the number of directors shall be fixed from time to time by resolution adopted by the vote of the Board. Our Charter provides that our Board shall be divided into three classes, each consisting as nearly as reasonably may be possible of one-third of the total number of directors constituting the entire Board, with each class’s term expiring on a staggered basis. Newly-created directorships and vacancies on our Board may only be filled by a majority of the members of the incumbent board then in office, though less than a quorum, and not by our stockholders. Directors may be removed from office only for cause by the affirmative vote of the holders of at least seventy-five percent (75%) of the outstanding shares entitled to be cast on the election of directors by the then-outstanding shares of all classes and series of capital stock, voting together as a single class. Holders of common stock have no preemptive, redemption or conversion rights and are not subject to future calls or assessments. No sinking fund provisions apply to our common stock. All outstanding shares are fully-paid and non-assessable. In the event of any liquidation, dissolution or winding up of our company, after the satisfaction in full of the liquidation preferences of holders of any preferred stock, holders of common stock are entitled to ratable distribution of the remaining assets available for distribution to stockholders. Holders of common stock are entitled to receive proportionately any such dividends declared by our Board, out of legally available funds for dividends, subject to any preferences that may be applicable to any shares of preferred stock that may be outstanding at that time.

Preferred Stock

As discussed below under the heading “Securities We May Offer,” we may issue shares of our preferred stock from time to time, in one or more series. Under our Charter, our Board has the authority to issue, without further action by our stockholders, up to 5,000,000 shares of undesignated preferred stock in one or more series and to fix the designations, powers, preferences and the relative, participating, optional or other special rights of the shares of each series and any qualification, limitations and restrictions thereon, any or all of which may be greater than the rights of our common stock.

If we issue preferred stock, we will fix the designations, powers, preferences and the relative, participating, optional or other special rights, and any qualification, limitations and restrictions of the shares of each series that we sell under this prospectus and applicable prospectus supplements in the certificate of designations relating to that series. If we issue preferred stock, we will incorporate by reference into the registration statement of which this prospectus is a part the form of any certificate of designations that describes the terms of such series of preferred stock before the issuance thereof. We urge you to read any prospectus supplement related to any series of preferred stock we may offer, as well as the complete certificate of designations that contains the terms of the applicable series of preferred stock.

Warrants

As discussed below under the heading “Securities We May Offer,” we may issue warrants for the purchase of common stock, preferred stock and/or units (as described below) in one or more series, from time to time. We may issue warrants independently or together with common stock and/or preferred stock, and the warrants may be attached to or separate from those securities.

If we issue warrants, they will be evidenced by warrant agreements or warrant certificates issued under one or more warrant agreements, which are contracts between us and an agent for the holders of the warrants. We urge you to read any prospectus supplement related to any series of warrants we may offer, as well as the complete warrant agreement and warrant certificate that contain the terms of the warrants. If we issue warrants, forms of warrant agreements and warrant certificates relating to such warrants will be incorporated by reference into the registration statement of which this prospectus is a part from other filings we would make with the SEC.

Table of Contents

Units

As discussed below under the heading “Securities We May Offer,” we may issue units comprised of shares of common stock, shares of preferred stock and warrants in any combination. We may issue units in such amounts and in as many distinct series as we wish.

If we issue units, they will be issued under one or more unit agreements to be entered into between us and a bank or other financial institution, as unit agent. We urge you to read any prospectus supplement related to any series of units we may offer, as well as the complete unit agreement and unit certificate that contain the terms of the units. If we issue units, forms of unit agreements and unit certificates relating to such units will be incorporated by reference into the registration statement of which this prospectus is a part from other filings we would make with the SEC.

RISK FACTORS

Investing in our securities involves a high degree of risk. You should carefully consider the risks described herein and in the documents incorporated by reference in this prospectus and any prospectus supplement, as well as other information we include or incorporate by reference into this prospectus and any applicable prospectus supplement, before making an investment decision. Our business, financial condition or results of operations could be materially adversely affected by the materialization of any of these risks. The trading price of our securities could decline due to the materialization of any of these risks, and you may lose all or part of your investment. This prospectus and the documents incorporated herein by reference also contain forward-looking statements that involve risks and uncertainties. Actual results could differ materially from those anticipated in these forward-looking statements as a result of certain factors, including the risks described herein and in the documents incorporated herein by reference, including (i) our most recent annual report on Form 10-K which is on file with the SEC and is incorporated herein by reference and (ii) other documents we file with the SEC that are deemed incorporated by reference into this prospectus.

NOTE REGARDING FORWARD-LOOKING STATEMENTS

This prospectus contains, and the documents incorporated by reference herein include, “forward-looking statements” within the meaning of Section 27A of the Securities Act of 1933, as amended (the “Securities Act”) and Section 21E of the Securities Exchange Act of 1934, as amended (the “Exchange Act”). These statements relate to future events or to our future financial performance and involve known and unknown risks, uncertainties and other factors which may cause our actual results, performance or achievements to be materially different from any future results, performances or achievements expressed or implied by the forward-looking statements. Forward-looking statements include, but are not limited to, statements about management’s confidence or expectations, our business strategy, our ability to raise capital or borrow funds to consummate acquisitions and the availability of attractive acquisition candidates, our expectations regarding future costs of product revenues, our anticipated compliance with the covenants contained in our credit facility, the adequacy of our financial resources and our plans, objectives, expectations and intentions that are not historical facts.

In some cases, you can identify forward-looking statement by terms such as “believe,” “may,” “estimate,” “continue,” “anticipate,” “intend,” “should,” “could,” “would,” “target,” “seek,” “aim,” “believe,” “predicts,” “think,” “objectives,” “optimistic,” “strategy,” “potential,” “is likely,” “will,” “expect,” “plan” “project,” “permit” and similar expressions intended to identify forward-looking statements. These statements reflect our current views with respect to future events, are based on assumptions and are subject to risks and uncertainties. Given these uncertainties, you should not place undue reliance on these forward-looking statements. We discuss many of these risks in greater detail under the heading “Risk Factors” in our SEC filings, and under the caption “Risk Factors” in this prospectus. Also, these forward-looking statements represent our estimates and assumptions only as of the date of the document containing the applicable statement. You

should read this prospectus, the registration statement of which this prospectus is a part, and the exhibits and documents incorporated by reference herein and therein completely and with the understanding that our actual future results may be materially different from those described in forward-looking statements. We qualify all of the forward-looking statements in the foregoing documents by these cautionary statements.

Table of Contents

You should assume that information contained in or incorporated by reference into this prospectus is accurate only as of the date on the front cover of this prospectus or the date of the document incorporated by reference, as applicable. Unless required by law, we undertake no obligation to update or revise any forward-looking statements to reflect new information or future events or developments. Thus, you should not assume that our silence over time means that actual events are bearing out as expressed or implied in such forward-looking statements.

USE OF PROCEEDS

We cannot guarantee that we will receive any proceeds in connection with this offering because we may be unable or choose not to issue and sell any securities covered by this prospectus.

Unless otherwise provided in a supplement or amendment to this prospectus, we intend to use any net proceeds from this offering, together with other available funds, to fund the cash portion of future acquisition opportunities and to pay related costs, fees and expenses, and for other general corporate purposes.

Pending these uses, we intend to invest the net proceeds to us from this offering in a variety of capital preservation investments, including short-term, investment-grade and interest-bearing instruments. The precise amounts and timing of the application of proceeds will depend upon our funding requirements and the availability of other funds. Except as mentioned in any prospectus supplement, specific allocations of the proceeds to such purposes will not have been made at the date of that prospectus supplement.

Based upon our historical and anticipated future growth and our financial needs, we may engage in additional financings of a character and amount that we determine as the need arises. We may raise additional capital through additional public or private financings, the incurrence of debt and other available sources. Please see the discussion of the risks associated with our liquidity in the section "Risk Factors."

PLAN OF DISTRIBUTION

The securities being offered may be sold in one or more transactions at fixed prices, at prevailing market prices at the time of sale, at prices related to the prevailing market prices, at varying prices determined at the time of sale, or at negotiated prices. These sales may be effected at various times in one or more of the following transactions, or in other kinds of transactions:

- through underwriters for resale to the public or investors;
- transactions on the Nasdaq Stock Market or on any national securities exchange or U.S. inter-dealer system of a registered national securities association on which our common stock may be listed or quoted at the time of sale;
- in the over-the-counter market;
- in private transactions and transactions otherwise than on these exchanges or systems or in the over-the-counter market;
- in "at the market" offerings, within the meaning of Rule 415(a)(4) of the Securities Act of 1933, as amended, or the Securities Act, to or through a market maker or into an existing trading market, on an exchange or otherwise;
- in connection with short sales of the shares;

Table of Contents

- by pledge to secure debt and other obligations;
- through the writing of options, whether the options are listed on an options exchange or otherwise;
- in connection with the writing of non-traded and exchange-traded call options, in hedge transactions and in settlement of other transactions in standardized or over-the-counter options;
- through a combination of any of the above transactions; or
- any other method permitted by law.

We may sell our securities directly to one or more purchasers, or to or through underwriters, dealers or agents or through a combination of those methods. The related prospectus supplement will set forth the terms of each offering, including:

- the name or names of any agents, dealers, underwriters or investors who purchase the securities;
- the purchase price of the securities being offered and the proceeds we will receive from the sale;
- the amount of any compensation, discounts, commissions or fees to be received by the underwriters, dealer or agents;
- any over-allotment options under which underwriters may purchase additional securities from us;
- any discounts or concessions allowed or reallocated or paid to dealers;
- any securities exchanges on which such securities may be listed;
- the terms of any indemnification provisions, including indemnification from liabilities under the federal securities laws; and
- the nature of any transaction by an underwriter, dealer or agent during the offering that is intended to stabilize or maintain the market price of the securities.

With respect to any “at the market” offerings, unless we inform you otherwise in the prospectus supplement, the sales agent with respect to any such at-the-market offering will make all sales using commercially reasonable efforts consistent with its normal trading and sales practices and applicable laws, rules and regulations, on mutually agreeable terms between the sales agent and us. We will include in the prospectus supplement the amount of any compensation to be received by the sales agent.

In addition, any securities covered by this prospectus that qualify for sale pursuant to Regulation S may be sold pursuant to Regulation S rather than pursuant to this prospectus.

In connection with the sale of our securities, underwriters may receive compensation from us or from purchasers of our securities in the form of discounts, concessions or commissions. Underwriters, dealers and agents that participate in the distribution of our securities may be deemed to be underwriters. Discounts or commissions they receive and any profit on their resale of our securities may be considered underwriting discounts and commissions under the Securities Act.

In compliance with the guidelines of the Financial Industry Regulatory Authority, or FINRA, the maximum consideration or discount to be received by any FINRA member or independent broker dealer may not exceed eight percent (8.0%) of the aggregate amount of the securities offered to this prospectus.

Table of Contents

We may agree to indemnify underwriters, dealers and agents who participate in the distribution of our securities against various liabilities, including liabilities under the Securities Act. We may also agree to contribute to payments that the underwriters, dealers or agents may be required to make in respect of these liabilities. We may authorize dealers or other persons who act as our agents to solicit offers by various institutions to purchase our securities from us under contracts that provide for payment and delivery on a future date. We may enter into these contracts with commercial and savings banks, insurance companies, pension funds, investment companies, educational and charitable institutions and others. If we enter into these agreements concerning any series of our securities, we will indicate that in the prospectus supplement or amendment.

In connection with an offering of our securities, underwriters may engage in transactions that stabilize, maintain or otherwise affect the price of our securities. Specifically, underwriters may over-allot in connection with the offering, creating a syndicate short position in our securities for their own account. In addition, underwriters may bid for, and purchase, our securities in the open market to cover short positions or to stabilize the price of our securities. Finally, underwriters may reclaim selling concessions allowed for distributing our securities in the offering if the underwriters repurchase previously distributed securities in transactions to cover short positions, in stabilization transactions or otherwise. Any of these activities may stabilize or maintain the market price of our securities above independent market levels. Underwriters are not required to engage in any of these activities and may end any of these activities at any time. Agents and underwriters may engage in transactions with, or perform services for, us and our affiliates in the ordinary course of business.

SECURITIES WE MAY OFFER

The descriptions of the securities contained in this prospectus, together with the applicable prospectus supplements, summarize all the material terms and provisions of the various types of securities that we may offer. We will describe in the applicable prospectus supplement the particular terms of the securities offered by that prospectus supplement. If we so indicate in the applicable prospectus supplement, the terms of the securities may differ from the terms we have summarized below. We will also include in the prospectus supplement information, where applicable, about material United States federal income tax considerations relating to the securities and the securities exchange, if any, on which the securities will be listed.

Description of Capital Stock

The following description of our common stock and preferred stock, together with the additional information we include in any applicable prospectus supplements, summarizes the material terms and provisions of the common stock and preferred stock that we may offer under this prospectus. The following description of our capital stock does not purport to be complete and is subject to, and qualified in its entirety by, our Charter and our Amended and Restated Bylaws, as amended, or our “Bylaws”, which are exhibits to the registration statement of which this prospectus forms a part, and by applicable law. The terms of our common stock and preferred stock may also be affected by Delaware law.

Authorized Capital Stock

Our authorized capital stock consists of 80,000,000 shares of common stock, par value \$0.01 per share, and 5,000,000 shares of undesignated preferred stock, par value \$0.01 per share. As of March 31, 2015, there were 33,335,545 shares of common stock outstanding and no shares of preferred stock outstanding.

Common Stock

Holders of our common stock are entitled to one vote for each share held of record on all matters submitted to a vote of shareholders; provided, that, except as otherwise required by law, holders of common stock are not entitled to vote on any amendment to the Charter that changes the powers, preferences, rights or other terms of one or more series of undesignated preferred stock if the holders of the affected series are entitled to vote, separately or together, with the holders of one or more other such series, on such amendment pursuant to the Charter or Delaware General Corporation Law. Our Charter provides that our Board shall be divided into three classes, each consisting as nearly as reasonably may be possible of one-third of the total number of directors constituting the entire Board, with each class's term expiring on a staggered basis. Newly-created directorships and vacancies on our Board may only be filled by a majority of the members of the incumbent board then in office, though less than a quorum, and not by our stockholders. Directors may be removed from office only for cause by the affirmative vote of the holders of at least seventy-five percent (75%) of the outstanding shares entitled to be cast on the election of directors by the then-outstanding shares of all classes and series of capital stock, voting together as a single class. Holders of common stock have no preemptive, redemption or conversion rights and are not subject to future calls or assessments. No sinking fund provisions apply to our common stock. All outstanding shares are fully-paid and non-assessable. In the event of our liquidation, dissolution or winding up, after the satisfaction in full of the liquidation preferences of holders of any preferred stock, holders of common stock are entitled to ratable distribution of the remaining assets available for distribution to stockholders. Holders of common stock are entitled to receive proportionately any such dividends declared by our Board, out of legally available funds for dividends, subject to any preferences that may be applicable to any shares of preferred stock that may be outstanding at that time. The rights, preferences and privileges of holders of common stock are subject to, and may be adversely affected by, the rights of the holders of shares of any series of preferred stock that we may designate and issue in the future. To the extent our Shareholder Rights Agreement remains in effect at the time we sell any shares of common stock under this prospectus, such shares of common stock would also be accompanied by certain preferred stock purchase rights. See "Description of Capital Stock – Provisions of our Certificate of Incorporation and Bylaws and Delaware Anti-Takeover Law" for additional details regarding our Shareholder Rights Agreement.

Table of Contents

Listing

Our common stock is listed on the NASDAQ Global Market under the symbol “HBIO.” On April 17, 2015, the closing price for our common stock, as reported on the NASDAQ Global Market, was \$6.50 per share. As of the close of business on March 31, 2015, there were approximately 168 stockholders of record of our common stock.

Transfer Agent and Registrar

The transfer agent and registrar for our common stock is Computershare.

Preferred Stock

Our Board is authorized to issue up to 5,000,000 shares of preferred stock in one or more series without shareholder approval. Our Board may determine the rights, preferences, privileges and restrictions, including voting rights, dividend rights, conversion rights, redemption privileges and liquidation preferences, of each series of preferred stock.

The purpose of authorizing our Board to issue preferred stock in one or more series and determine the number of shares in the series and its rights and preferences is to eliminate delays associated with a shareholder vote on specific issuances. Examples of rights and preferences that the Board may fix are:

- dividend rights;
- dividend rates;
- conversion rights;
- voting rights;
- terms of redemption; and
- liquidation preferences.

The existence of authorized but unissued shares of preferred stock may enable our Board to render more difficult or to discourage an attempt to obtain control of us by means of a merger, tender offer, proxy contest or otherwise. For example, if in the due exercise of its fiduciary obligations, our Board were to determine that a takeover proposal is not in the best interests of us or our stockholders, our Board could cause shares of preferred stock to be issued without stockholder approval in one or more private offerings or other transactions that might dilute the voting or other rights of the proposed acquirer, stockholder or stockholder group. The rights of holders of our common stock described above, will be subject to, and may be adversely affected by, the rights of any preferred stock that we may designate and issue in the future. The issuance of shares of preferred stock could decrease the amount of earnings and assets available for distribution to holders of shares of common stock. The issuance may also adversely affect the rights and powers, including voting rights, of these holders and may have the effect of delaying, deterring or preventing a change in control of us.

Table of Contents

We will incorporate by reference as an exhibit to the registration statement, which includes this prospectus, the form of any certificate of designations that describes the terms of the series of preferred stock we are offering. This description and the applicable prospectus supplement will include:

- the title and stated value;
- the number of shares authorized;
- the liquidation preference per share;
- the purchase price;
- the dividend rate, period and payment date, and method of calculation for dividends;
- whether dividends will be cumulative or non-cumulative and, if cumulative, the date from which dividends will accumulate;
- the procedures for any auction and remarketing, if any;
- the provisions for a sinking fund, if any;
- the provisions for redemption or repurchase, if applicable, and any restrictions on our ability to exercise those redemption and repurchase rights;
- any listing of the preferred stock on any securities exchange or market;
- whether the preferred stock will be convertible into our common stock, and, if applicable, the conversion price, or how it will be calculated, and the conversion period;
- voting rights, if any, of the preferred stock;
- preemptive rights, if any;
- restrictions on transfer, sale or other assignment, if any;
- whether interests in the preferred stock will be represented by depositary shares;
- a discussion of any material United States federal income tax considerations applicable to the preferred stock;
- the relative ranking and preferences of the preferred stock as to dividend rights and rights if we liquidate, dissolve or wind up our affairs;
- any limitations on issuance of any class or series of preferred stock ranking senior to or on a parity with the series of preferred stock as to dividend rights and rights if we liquidate, dissolve or wind up our affairs; and
- any other specific terms, preferences, rights or limitations of, or restrictions on, the preferred stock.

Table of Contents

When we issue shares of preferred stock under this prospectus, the shares will fully be paid and nonassessable and will not have, or be subject to, any preemptive or similar rights.

Third Amended and Restated 2000 Stock Option and Incentive Plan

Under the Third Amended and Restated 2000 Stock Option and Incentive Plan (as amended, the “Plan”), we can grant stock options to employees, directors and consultants. The Plan also permits us to make grants of incentive stock options, non-qualified stock options, stock appreciation rights, deferred stock awards, restricted stock awards, unrestricted stock awards, performance shares and dividend equivalent rights. We currently have reserved 15,008,929 shares of common stock for the issuance of awards under the Plan, of which options to purchase 6,263,112 shares and 306,397 restricted stock units were issued as of December 31, 2014.

On April 3, 2015, the Board approved, subject to shareholder approval, an amendment to the Plan (the “Plan Amendment”) to increase by 2,500,000 shares the number of authorized shares of common stock available for issuance under the Plan from 15,008,929 shares to 17,508,929 shares. The Board is seeking stockholder approval of the Plan Amendment, which is included on our definitive proxy statement on Schedule 14A filed with the SEC on April 10, 2015. In the event that the Plan Amendment is not approved by stockholders, the Plan will continue in effect without the amendment described above.

Employee Stock Purchase Plan

Under our employee stock purchase plan, participating employees can authorize us to withhold a portion of their base pay during consecutive six-month payment periods for the purchase of shares of our common stock. At the conclusion of the period, participating employees can purchase shares of our common stock at eight-five percent (85%) of the lower of the fair market value of our common stock at the beginning or end of the period. Shares are issued under the plan for the six-month periods ending June 30 and December 31. Under this plan, 750,000 shares of common stock are authorized for issuance, of which 585,188 shares were issued as of December 31, 2014.

Provisions of our Certificate of Incorporation and Bylaws and Delaware Anti-Takeover Law

Certain provisions of the Delaware General Corporation Law and of our Charter and Bylaws could have the effect of delaying, deferring or discouraging another party from acquiring control of us. These provisions, which are summarized below, are expected to discourage certain types of coercive takeover practices and inadequate takeover bids and, as a consequence, they might also inhibit temporary fluctuations in the market price of our common stock that often result from actual or rumored hostile takeover attempts. These provisions are also designed in part to encourage anyone seeking to acquire control of us to first negotiate with our Board. These provisions might also have the effect of preventing changes in our management. It is possible that these provisions could make it more difficult to accomplish transactions that stockholders might otherwise deem to be in their best interests. However, we believe that the advantages gained by protecting our ability to negotiate with any unsolicited and potentially unfriendly acquirer outweigh the disadvantages of discouraging such proposals, including those priced above the then-current market value of our common stock, because, among other reasons, the negotiation of such proposals could improve their terms.

Provisions of our Certificate of Incorporation and Bylaws

Our Charter, our Bylaws and Delaware law contain provisions that could discourage, delay or prevent a third party from acquiring us, even if doing so may be beneficial to our stockholders. In addition, these provisions could limit the price investors would be willing to pay in the future for shares of our common stock. The following are examples of such provisions in our Charter and Bylaws:

- only our Board, pursuant to a resolution adopted by a majority of our directors, may call special meetings of our stockholders;
- stockholders may not act by written consent and stockholder action must take place at the annual or special meeting of our stockholders;

Table of Contents

- stockholder proposals and nominations of candidates for election as directors other than nominations made by or at the direction of our Board or a committee of our Board to be brought before any meeting of our stockholders must comply with advance notice procedures;
- our Board is classified into three classes, each consisting as nearly as reasonably may be possible of one-third of the total number of directors constituting the entire Board;
- our Board will fix the exact number of directors to comprise our Board;
- subject to any rights that holders of any series of our undesignated preferred stock may have to elect directors and to fill vacancies on our Board, newly-created directorships and vacancies on our Board may only be filled by a majority of the members of the incumbent board then in office, even if less than a quorum is present, and not by our stockholders;
- a director may be removed from office only for cause by the affirmative vote of holders of shares representing at least seventy-five percent (75%) of the votes entitled to be cast on such matter by the then-outstanding shares of all classes and series of our capital stock, voting together as a single class;
- our Charter and Bylaws do not provide for cumulative voting in the election of directors;
- our Bylaws may be further amended by either (i) the affirmative vote of at least a majority of our entire Board or (ii) the affirmative vote of the holders of at least seventy-five percent (75%) of the combined voting power of the outstanding shares of all classes and series of our capital stock entitled to vote on such amendment, voting together as a single class; and
- our Board is authorized to issue, without further action by our stockholders, up to 5,000,000 shares of undesignated preferred stock with rights and preferences, including voting rights, designated from time to time by our Board.

We implemented a Shareholder Rights Plan (the “Rights Plan”) on February 5, 2008. Pursuant to the Rights Plan, one preferred stock purchase right will be issued for each outstanding share of our common stock. Each right issued will be subject to the terms of the Rights Plan. The Rights Plan is intended to protect our stockholders in the event of an unfair or coercive offer to acquire us and to provide the Board with adequate time to evaluate unsolicited offers; however, it may have anti-takeover effects. In general terms, our Rights Plan works by imposing a significant penalty upon any person or group that acquires twenty percent (20%) or more of our outstanding common stock, without the approval of our Board. The Rights Plan, however, should not affect any prospective offer or willingness to make an offer at a fair price as determined by our Board, nor should it interfere with any merger or other business combination approved by our Board. However, because the rights may substantially dilute the stock ownership of a person or group attempting to take us over without the approval of our Board, our Rights Plan could make it more difficult for a third party to acquire us (or a significant percentage of our outstanding capital stock) without first negotiating with our Board regarding that acquisition.

Additionally, as required by the Delaware General Corporation Law, any amendment of our Charter must first be approved by a majority of our Board and, as required by our Charter, thereafter be approved by a majority of the outstanding shares entitled to vote on the amendment, and a majority of the outstanding shares of each class entitled to vote thereon, voting together as a single class, except that the amendment of the provisions relating to stockholder action, directors, limitation of liability, the amendment of our Bylaws and Charter and forum must be approved by not less than seventy-five percent (75%) of the outstanding shares entitled to vote on the amendment, and not less than

seventy-five percent (75%) of the outstanding shares of each class entitled to vote thereon as a class. Our Bylaws may be amended by either (i) a vote of at least a majority of our entire Board or (ii) a vote of the holders of at least seventy-five percent (75%) of the combined voting power of the outstanding shares of all classes and series of our capital stock entitled to vote on such amendment, voting together as a single class.

Table of Contents

Delaware Anti-Takeover Law

We are subject to the provisions of Section 203 of the Delaware General Corporation Law. In general, Section 203 prohibits a publicly-held Delaware corporation from engaging in a “business combination” with an “interested stockholder” for a three-year period following the time that this stockholder becomes an interested stockholder, unless the business combination is approved in a prescribed manner. A “business combination” includes, among other things, a merger, asset or stock sale or other transaction resulting in a financial benefit to the interested stockholder. An “interested stockholder” is a person who, together with affiliates and associates, owns, or did own within three years prior to the determination of interested stockholder status, fifteen percent (15%) or more of the corporation’s voting stock. Under Section 203, a business combination between a corporation and an interested stockholder is prohibited unless it satisfies one of the following conditions:

- before the stockholder became interested, the Board approved either the business combination or the transaction which resulted in the stockholder becoming an interested stockholder;
- upon consummation of the transaction which resulted in the stockholder becoming an interested stockholder, the interested stockholder owned at least eight-five percent (85%) of the voting stock of the corporation outstanding at the time the transaction commenced, excluding for purposes of determining the voting stock outstanding, shares owned by persons who are directors and also officers, and employee stock plans, in some instances; or
- at or after the time the stockholder became interested, the business combination was approved by the Board of the corporation and authorized at an annual or special meeting of the stockholders by the affirmative vote of at least two-thirds of the outstanding voting stock which is not owned by the interested stockholder.

Description of Warrants

The following description, together with the additional information we may include in any applicable prospectus supplements, summarizes the material terms and provisions of the warrants that we may offer under this prospectus and the related warrant agreements and warrant certificates. While the terms summarized below will apply generally to any warrants that we may offer, we will describe the particular terms of any series of warrants in more detail in the applicable prospectus supplement. If we indicate in the prospectus supplement, the terms of any warrants offered under that prospectus supplement may differ from the terms described below. Specific warrant agreements will contain additional important terms and provisions and will be incorporated by reference as an exhibit to the registration statement, which includes this prospectus.

General

We may issue warrants for the purchase of common stock and/or preferred stock in one or more series. We may issue warrants independently or together with common stock and/or preferred stock, and the warrants may be attached to or separate from these securities.

We will evidence each series of warrants by warrant certificates that we will issue under a separate warrant agreement. We will enter into the warrant agreement with a warrant agent. We will indicate the name and address of the warrant agent in the applicable prospectus supplement relating to a particular series of warrants.

We will describe in the applicable prospectus supplement the terms of the series of warrants, including:

- the offering price and aggregate number of warrants offered;

- the currency for which the warrants may be purchased;
- if applicable, the designation and terms of the securities with which the warrants are issued and the number of warrants issued with each such security or each principal amount of such security;

Table of Contents

- if applicable, the date on and after which the warrants and the related securities will be separately transferable;
- in the case of warrants to purchase common stock or preferred stock, the number of shares of common stock or preferred stock, as the case may be, purchasable upon the exercise of one warrant and the price at which these shares may be purchased upon such exercise;
- the effect of any merger, consolidation, sale or other disposition of our business on the warrant agreement and the warrants;
- the terms of any rights to redeem or call the warrants;
- any provisions for changes to or adjustments in the exercise price or number of securities issuable upon exercise of the warrants;
- the periods during which, and places at which, the warrants are exercisable;
- the manner of exercise;
- the dates on which the right to exercise the warrants will commence and expire;
- the manner in which the warrant agreement and warrants may be modified;
- federal income tax consequences of holding or exercising the warrants;
- the terms of the securities issuable upon exercise of the warrants; and
- any other specific terms, preferences, rights or limitations of or restrictions on the warrants.

Description of Units

We may issue units comprised of shares of common stock, shares of preferred stock and warrants in any combination. We may issue units in such amounts and in as many distinct series as we wish. This section outlines certain provisions of the units that we may issue. If we issue units, they will be issued under one or more unit agreements to be entered into between us and a bank or other financial institution, as unit agent. The information described in this section may not be complete in all respects and is qualified entirely by reference to the unit agreement with respect to the units of any particular series. The specific terms of any series of units offered will be described in the applicable prospectus supplement. If so described in a particular supplement, the specific terms of any series of units may differ from the general description of terms presented below. We urge you to read any prospectus supplement related to any series of units we may offer, as well as the complete unit agreement and unit certificate that contain the terms of the units. If we issue units, forms of unit agreements and unit certificates relating to such units will be incorporated by reference as exhibits to the registration statement, which includes this prospectus.

Each unit that we may issue will be issued so that the holder of the unit is also the holder of each security included in the unit. Thus, the holder of a unit will have the rights and obligations of a holder of each included security. The unit agreement under which a unit is issued may provide that the securities included in the unit may not be held or transferred separately, at any time or at any time before a specified date. The applicable prospectus supplement may describe:

-

the designation and terms of the units and of the securities comprising the units, including whether and under what circumstances those securities may be held or transferred separately;

Table of Contents

- any provisions of the governing unit agreement;
- the price or prices at which such units will be issued;
- the applicable United States federal income tax considerations relating to the units;
- any provisions for the issuance, payment, settlement, transfer or exchange of the units or of the securities comprising the units; and
- any other terms of the units and of the securities comprising the units.

The provisions described in this section, as well as those described under “Description of Capital Stock” and “Description of Warrants” will apply to the securities included in each unit to the extent relevant and as may be updated in any prospectus supplements.

Issuance in Series

We may issue units in such amounts and in as many distinct series as we wish. This section summarizes terms of the units that apply generally to all series. Most of the financial and other specific terms of your series will be described in the applicable prospectus supplement.

Unit Agreements

We will issue the units under one or more unit agreements to be entered into between us and a bank or other financial institution, as unit agent. We may add, replace or terminate unit agents from time to time. We will identify the unit agreement under which each series of units will be issued and the unit agent under that agreement in the applicable prospectus supplement.

The following provisions will generally apply to all unit agreements unless otherwise stated in the applicable prospectus supplement:

Modification without Consent

We and the applicable unit agent may amend any unit or unit agreement without the consent of any holder:

- to cure any ambiguity; any provisions of the governing unit agreement that differ from those described below;
- to correct or supplement any defective or inconsistent provision; or
- to make any other change that we believe is necessary or desirable and will not adversely affect the interests of the affected holders in any material respect.

We do not need any approval to make changes that affect only units to be issued after the changes take effect. We may also make changes that do not adversely affect a particular unit in any material respect, even if they adversely affect other units in a material respect. In those cases, we do not need to obtain the approval of the holder of the unaffected unit; we need only obtain any required approvals from the holders of the affected units.

Table of Contents

Modification with Consent

We may not amend any particular unit or a unit agreement with respect to any particular unit unless we obtain the consent of the holder of that unit, if the amendment would:

- impair any right of the holder to exercise or enforce any right under a security included in the unit if the terms of that security require the consent of the holder to any changes that would impair the exercise or enforcement of that right; or
- reduce the percentage of outstanding units or any series or class the consent of whose holders is required to amend that series or class, or the applicable unit agreement with respect to that series or class, as described below.

Any other change to a particular unit agreement and the units issued under that agreement would require the following approval:

- If the change affects only the units of a particular series issued under that agreement, the change must be approved by the holders of a majority of the outstanding units of that series; or
- If the change affects the units of more than one series issued under that agreement, it must be approved by the holders of a majority of all outstanding units of all series affected by the change, with the units of all the affected series voting together as one class for this purpose.

These provisions regarding changes with majority approval also apply to changes affecting any securities issued under a unit agreement, as the governing document.

In each case, the required approval must be given by written consent.

Mergers and Similar Transactions Permitted; No Restrictive Covenants or Events of Default

The unit agreements will not restrict our ability to merge or consolidate with, or sell our assets to, another corporation or other entity or to engage in any other transactions. If at any time we merge or consolidate with, or sell our assets substantially as an entirety to, another corporation or other entity, the successor entity will succeed to and assume our obligations under the unit agreements. We will then be relieved of any further obligation under these agreements.

The unit agreements will not include any restrictions on our ability to put liens on our assets, including our interests in our subsidiaries, nor will they restrict our ability to sell our assets. The unit agreements also will not provide for any events of default or remedies upon the occurrence of any events of default.

Governing Law

The unit agreements and the units will be governed by Delaware law.

Form, Exchange and Transfer

We will issue each unit in global—i.e., book-entry—form only. Units in book-entry form will be represented by a global security registered in the name of a depositary, which will be the holder of all the units represented by the global security. Those who own beneficial interests in a unit will do so through participants in the depositary's system, and the rights of these indirect owners will be governed solely by the applicable procedures of the depositary and its

participants. We will describe book-entry securities, and other terms regarding the issuance and registration of the units in the applicable prospectus supplement.

Each unit and all securities comprising the unit will be issued in the same form.

If we issue any units in registered, non-global form, the following will apply to them.

The units will be issued in the denominations stated in the applicable prospectus supplement. Holders may exchange their units for units of smaller denominations or combined into fewer units of larger denominations, as long as the total amount is not changed.

Table of Contents

- Holders may exchange or transfer their units at the office of the unit agent. Holders may also replace lost, stolen, destroyed or mutilated units at that office. We may appoint another entity to perform these functions or perform them ourselves.
- Holders will not be required to pay a service charge to transfer or exchange their units, but they may be required to pay for any tax or other governmental charge associated with the transfer or exchange. The transfer or exchange, and any replacement, will be made only if our transfer agent is satisfied with the holder's proof of legal ownership. The transfer agent may also require an indemnity before replacing any units.
- If we have the right to redeem, accelerate or settle any units before their maturity, and we exercise our right as to less than all those units or other securities, we may block the exchange or transfer of those units during the period beginning 15 days before the day we mail the notice of exercise and ending on the day of that mailing, in order to freeze the list of holders to prepare the mailing. We may also refuse to register transfers of or exchange any unit selected for early settlement, except that we will continue to permit transfers and exchanges of the unsettled portion of any unit being partially settled. We may also block the transfer or exchange of any unit in this manner if the unit includes securities that are or may be selected for early settlement.

Only the depository will be entitled to transfer or exchange a unit in global form, since it will be the sole holder of the unit.

Payments and Notices

In making payments and giving notices with respect to our units, we will follow the procedures as described in the applicable prospectus supplement.

LEGAL MATTERS

Certain legal matters in connection with this offering will be passed upon for us by Burns & Levinson LLP, Boston, Massachusetts. Any underwriters will also be advised about the validity of the securities and other legal matters by their own counsel, which will be named in the prospectus supplement.

EXPERTS

The consolidated financial statements of Harvard Bioscience, Inc. as of December 31, 2014 and 2013, and for each of the years in the three-year period ended December 31, 2014, and management's assessment of the effectiveness of internal control over financial reporting as of December 31, 2014 have been incorporated by reference herein and in the registration statement in reliance upon the reports of KPMG LLP, independent registered public accounting firm, incorporated by reference herein, and upon the authority of said firm as experts in accounting and auditing.

WHERE YOU CAN FIND MORE INFORMATION

We are subject to the information requirements of the Exchange Act and, in accordance therewith, file annual, quarterly and special reports, proxy statements and other information with the SEC. You may read and copy any document we file at the SEC's Public Reference Room at 100 F Street, Washington, D.C. 20549. You may call the SEC at 1-800-SEC-0330 for further information on the operation of the Public Reference Room. These documents also may be accessed through the SEC's electronic data gathering, analysis and retrieval system, or EDGAR, via electronic means, including the SEC's home page on the Internet (www.sec.gov).

We have the authority to designate and issue more than one class or series of stock having various preferences, conversion and other rights, voting powers, restrictions, limitations as to dividends, qualifications, and terms and conditions of redemption. See "Description of Capital Stock." We will furnish a full statement of the relative rights and preferences of each class or series of our stock which has been so designated and any restrictions on the ownership or transfer of our stock to any shareholder upon request and without charge. Written requests for such copies should be directed to Harvard Bioscience, Inc., 84 October Hill Road, Holliston, Massachusetts 01746-1371, or by telephone request to (508) 893-8999. Our website is located at <http://www.harvardbioscience.com>. Information contained on our website is not incorporated by reference into this prospectus and, therefore, is not part of this prospectus or any accompanying prospectus supplement.

Table of Contents

INCORPORATION OF CERTAIN DOCUMENTS BY REFERENCE

The SEC allows us to incorporate by reference the information and reports we file with it, which means that we can disclose important information to you by referring you to these documents. The information incorporated by reference is an important part of this prospectus, and information that we file later with the SEC will automatically update and supersede the information already incorporated by reference. We are incorporating by reference the documents listed below, which we have already filed with the SEC, and any future filings we make with the SEC under Sections 13(a), 13(c), 14 or 15(d) of the Exchange Act, except as to any portion of any future report or document that is not deemed filed under such provisions, until we sell all of the securities:

- Our Annual Report on Form 10-K for the year ended December 31, 2014;
- Our Current Report on Form 8-K dated January 9, 2015; and
- The description of our common stock contained in our Amendment No. 6 to Form S-1 Registration Statement filed with the SEC on December 6, 2000.

Upon request, we will provide, without charge, to each person, including any beneficial owner, to whom a copy of this prospectus is delivered a copy of the documents incorporated by reference into this prospectus. You may request a copy of these filings, and any exhibits we have specifically incorporated by reference as an exhibit in this prospectus, at no cost by writing or telephoning us at the following address:

Harvard Bioscience, Inc.
84 October Hill Road
Holliston, Massachusetts 01746-1371
Telephone: (508) 893-8999

This prospectus is part of a registration statement we filed with the SEC. We have incorporated exhibits into this registration statement. You should read the exhibits carefully for provisions that may be important to you.

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

Table of Contents

\$50,000,000

Common Stock
Preferred Stock
Warrants
Units

PROSPECTUS

, 20__

We have not authorized any dealer, salesperson or other person to give any information or represent anything not contained in this prospectus. You must not rely on any unauthorized information. If anyone provides you with different or inconsistent information, you should not rely on it. This prospectus does not offer to sell any securities in any jurisdiction where it is unlawful. Neither the delivery of this prospectus, nor any sale made hereunder, shall create any implication that the information in this prospectus is correct after the date hereof.

Table of Contents

Part II—INFORMATION NOT REQUIRED IN PROSPECTUS

Item 14. Other Expenses of Issuance and Distribution

The expenses payable by Harvard Bioscience, Inc. (the “Registrant” or the “Company”) in connection with the issuance and distribution of the securities being registered (other than underwriting discounts and commissions, if any) are set forth below. Each item listed is estimated, except for the Securities and Exchange Commission (the “SEC”) registration fee.

SEC registration fee	\$5,810
FINRA filing fee	*
Legal fees and expenses	*
Accounting fees and expenses	*
Printing fees and expenses	*
Transfer agent and trustee fees	*
Miscellaneous	*
Total	\$5,810

* Estimated expenses not presently known.

Item 15. Indemnification of Directors and Officers

As permitted by Section 102 of the Delaware General Corporation Law, we have adopted provisions in our Second Amended and Restated Certificate of Incorporation, or our Charter, and Amended and Restated Bylaws, as amended, or our Bylaws, that limit or eliminate the personal liability of our directors for a breach of their fiduciary duty of care as a director. The duty of care generally requires that, when acting on behalf of the corporation, directors exercise an informed business judgment based on all material information reasonably available to them. Consequently, a director will not be personally liable to us or our stockholders for monetary damages or breach of fiduciary duty as a director, except for liability for:

- any breach of the director’s duty of loyalty to us or our stockholders;
- any act or omission not in good faith or that involves intentional misconduct or a knowing violation of law;
- any act related to unlawful stock repurchases, redemptions or other distributions or payments of dividends; or
- any transaction from which the director derived an improper personal benefit.

These limitations of liability do not affect the availability of equitable remedies such as injunctive relief or rescission. Our Charter also authorizes us to indemnify our officers, directors and other agents to the fullest extent permitted under Delaware law.

As permitted by Section 145 of the Delaware General Corporation Law, our Charter and Bylaws provide that we will indemnify any person who was or is a party or is threatened to be made a party to any threatened, pending or completed action, suit or proceeding by reason of the fact that such person, or a person of whom he or she is the legal representative, is or was our director or officer, or by reason of the fact that our director or officer is or was serving, at our request, as a director, officer, employee or agent of another corporation or of a partnership, joint venture, trust or other enterprise, including service with respect to employee benefit plans maintained or sponsored by us. We will

indemnify such persons against expenses (including attorneys' fees), judgments, fines and amounts paid in settlement actually and reasonably incurred in connection with such action if such person acted in good faith and in a manner reasonably believed to be in our best interests and, with respect to any criminal proceeding, had no reason to believe such person's conduct was unlawful. A similar standard is applicable in the case of derivative actions, except that indemnification only extends to expenses (including attorneys' fees) incurred in connection with the defense or settlement of such actions, and court approval is required before there can be any indemnification where the person seeking indemnification has been found liable to us. Any amendment of this provision will not reduce our indemnification obligations relating to actions taken before an amendment.

Table of Contents

Our Charter and our Bylaws, each attached as an exhibit to our Amendment No. 2 to Form S-1 Registration Statement (File No. 333-45996, filed with the SEC on November 9, 2000), provide for the indemnification provisions described above and elsewhere herein. In addition, we have entered into separate indemnification agreements, a form of which is attached as Exhibit 10.8 to our Amendment No. 1 to Form S-1 Registration Statement (File No. 333-45996, filed with the SEC on October 25, 2000), with our directors and officers which may be broader than the specific indemnification provisions contained in the Delaware General Corporation Law.

These indemnification agreements generally require us, among other things, to indemnify our officers and directors against liabilities that may arise by reason of their status or service as directors or officers, subject to certain exceptions and limitations. These indemnification agreements also require us to advance any expenses incurred by the directors or officers as a result of any proceeding against them as to which they could be indemnified. In addition, we have obtained policies that insure our directors and officers and those of our subsidiaries against certain liabilities they may incur in their capacity as directors and officers. Under these policies, the insurer, on our behalf, may also pay amounts for which we have granted indemnification to the directors or officers. These indemnification provisions and the indemnification agreements may be sufficiently broad to permit indemnification of our officers and directors for liabilities, including reimbursement of expenses incurred, arising under the Securities Act.

Item 16. Exhibits

A list of exhibits filed with this registration statement on Form S-3 is set forth on the Exhibit Index and is incorporated herein by reference.

Item 17. Undertakings

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 Securities and Exchange Commission 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 paragraphs (a)(1)(i), (a)(1)(ii) and (a)(1)(iii) of this section 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 Securities and Exchange 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 part of the registration statement;

Table of Contents

(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;

(6) 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 Section 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; and

Table of Contents

(7) 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 of 1933 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 of 1933 and will be governed by the final adjudication of such issue;

Table of Contents

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 Amendment No. 1 to Registration Statement to be signed on its behalf by the undersigned, thereunto duly authorized, in the City of Holliston, Commonwealth of Massachusetts, on April 27, 2015.

HARVARD BIOSCIENCE, INC.

By: /s/ Jeffrey A. Duchemin
Name: Jeffrey A. Duchemin
Title: Chief Executive Officer

Pursuant to the requirements of the Securities Act of 1933, this Amendment No. 1 to Registration Statement has been signed by the following persons in the capacities and on the dates indicated.

Signature	Title	Date
/s/ JEFFREY A. DUCHEMIN Jeffrey A. Duchemin	President, Chief Executive Officer and Director (Principal Executive Officer)	April 27, 2015
/s/ ROBERT E. GAGNON Robert E. Gagnon	Chief Financial Officer (Principal Financial Officer and Principal Accounting Officer)	April 27, 2015
* Robert Dishman	Director	April 27, 2015
* David Green	Director	April 27, 2015
* Neal J. Harte	Director	April 27, 2015
* John F. Kennedy	Director	April 27, 2015
* Earl R. Lewis	Director	April 27, 2015
* Bertrand Loy	Director	April 27, 2015
* George Uveges	Director	April 27, 2015

* By: /s/ JEFFREY A. DUCHEMIN

Jeffrey A. Duchemin
Attorney-in-Fact

Table of Contents

EXHIBIT INDEX

Exhibit No.	Description
1.1*	Form of underwriting agreement
3.1(1)	Second Amended and Restated Certificate of Incorporation of Harvard Bioscience, Inc.
3.2(1)	Amended and Restated Bylaws of Harvard Bioscience, Inc.
3.3(2)	Amendment No. 1 to Amended and Restated Bylaws of Harvard Bioscience, Inc. (as adopted October 30, 2007)
4.3(1)	Specimen certificate for shares of Common Stock, \$0.01 par value, of Harvard Bioscience, Inc.
4.4*	Form of Certificate of Designations
4.5*	Form of Warrant and Warrant Agreement
4.6*	Form of Unit Agreement
4.7(3)	Shareholder Rights Agreement, dated as of February 5, 2008 between Harvard Bioscience, Inc. and Registrar and Transfer Company, as Rights Agent.
5.1	Opinion of Burns & Levinson LLP
23.1	Consent of Burns & Levinson LLP (included in Exhibit 5.1)
23.2	Consent of KPMG, LLP
24.1(4)	Power of Attorney

* To be filed, if necessary, by amendment or as an exhibit to a document to be incorporated or deemed to be incorporated by reference in this registration statement, including a Current Report on Form 8-K.

(1) Previously filed as an exhibit to the registrant's Amendment No. 2 to Form S-1 Registration Statement (File No. 333-45996, filed with the SEC on November 9, 2000) and incorporated by reference thereto.

(2) Previously filed as an exhibit to the registrant's Current Report on Form 8-K (filed on November 1, 2007) and incorporated by reference thereto.

(3) Previously filed as an exhibit to registrant's Registration Statement on Form 8-A (filed February 8, 2008) and incorporated by reference thereto.

(4) Previously filed on the signature page to the Registration Statement of Form S-3 filed on April 21, 2015 and amended hereby.