

BioAmber Inc.
Form 424B5
August 08, 2017

Filed pursuant to Rule 424(b)(5)
Registration No. 333-215408

The information in this preliminary prospectus supplement is not complete and may be changed. This preliminary prospectus supplement and the accompanying prospectus are not an offer to sell these securities and we are not soliciting an offer to buy these securities in any jurisdiction where the offer or sale is not permitted.

SUBJECT TO COMPLETION, DATED AUGUST 7, 2017

Prospectus Supplement to Prospectus dated January 12, 2017

BioAmber Inc.

shares of common stock

Warrants to purchase shares of common stock

We are offering shares of our common stock, par value \$0.01 per share, and common stock purchase warrants, or warrants, to purchase up to shares of our common stock (and the shares of common stock issuable from time to time upon exercise of these warrants). Each share of common stock is being sold together in a fixed combination with a warrant to purchase shares of common stock at an initial exercise price of \$ per share and a term of five years, and the fixed combination is being sold at a price of \$ per share and associated warrant. The shares of common stock and warrants will be issued separately but can only be purchased together in this offering.

Certain members of our senior management, including our Chief Executive Officer and Chief Financial Officer, and certain of our directors, have agreed to purchase restricted shares of our common stock and warrants, in fixed combinations, in a separate private placement concurrent with the completion of this offering at a price per fixed combination equal to the public offering price. The sale of the fixed combinations of shares of common stock and warrants in the concurrent private placement will not be registered under the Securities Act of 1933, as amended. The closing of this offering is not conditioned upon the closing of the concurrent private placement. Purchases of fixed combinations in the concurrent private placement which exceed \$250,000 in the aggregate will be subject to a commission payable to the underwriters of 3%.

Our common stock is listed on The New York Stock Exchange and the Toronto Stock Exchange under the symbol "BIOA." The last reported sale price of our common stock on The New York Stock Exchange on August 4, 2017 was \$1.52 per share. The warrants are not and will not be listed on any national securities exchange or other trading market.

Investing in our securities involves significant risks. Please read the information contained in or incorporated by reference under the heading “Risk Factors” beginning on page S-13 of this prospectus supplement, and under similar headings in other documents filed after the date hereof and incorporated by reference into this prospectus supplement and the accompanying prospectus.

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

	Per Fixed	
	Combination	Total
Offering(1)(2)	\$	\$
Underwriting discounts and commissions(3)	\$	\$
Proceeds, before expenses, to us(2)(4)	\$	\$

(1) Initial gross proceeds. If the warrants to purchase common stock are exercised in full, we will receive additional gross proceeds of \$ in the aggregate.

(2) Amounts presented in this table do not give effect to any exercise of the warrants being issued in the concurrent private placement.

(3) We have agreed to reimburse the Representative for certain of its expenses as described under the

“Underwriting” section on page S-40 of this prospectus supplement.

(4) If the warrants to purchase common stock are exercised in full, net proceeds, before expenses, will increase to \$ _____ in the aggregate.

We have granted the Representative an option for a period of 30 days from the date of this prospectus supplement to purchase up to additional shares of common stock from us and/or warrants to purchase up to shares of our common stock. If the Representative exercises this option in full, the total underwriting discounts and commissions will be \$ _____ and total proceeds, before expenses, to us will be \$ _____.

Delivery of the shares and warrants will take place on or about August, 2017, subject to the satisfaction of certain conditions.

Rodman & Renshaw

a unit of H.C. Wainwright & Co.

Prospectus Supplement dated August, 2017

TABLE OF CONTENTS

Prospectus Supplement

	Page
About This Prospectus Supplement	S-1
Where You Can Find Additional Information	S-2
Incorporation of Certain Information By Reference	S-3
Special Note Regarding Forward-Looking Statements	S-4
Summary	S-6
The Offering	S-9
Summary Consolidated Financial Data	S-11
Risk Factors	S-13
Use of Proceeds	S-27
Dilution	S-28
Capitalization	S-30
Price Range of Common Stock and Warrants	S-31
Dividend Policy	S-32
Description of Securities	S-33
Certain U.S. Federal Income Tax Considerations	S-36
Underwriting	S-42
Legal Matters	S-45
Experts	S-45

Prospectus

	Page
About This Prospectus	1
Where You Can Find Additional Information	1
Incorporation of Certain Information By Reference	3
Forward-Looking Statements	4
Summary	6
Risk Factors	10
Ratio of Earnings to Fixed Charges	11
Use of Proceeds	12
Dilution	13
Plan of Distribution	14
Description of Capital Stock	16

Description of Our Debt Securities	25
Description of Warrants	32
Description of Units	35
Forms of Securities	37
Legal Matters	39
Experts	39

ABOUT THIS PROSPECTUS SUPPLEMENT

This document is part of the registration statement that we filed with the Securities and Exchange Commission, or the SEC, using a “shelf” registration process and consists of two parts. The first part is this prospectus supplement, which describes the specific terms of this offering. The second part, the accompanying prospectus, gives more general information, some of which may not apply to this offering. Generally, when we refer only to the “prospectus,” we are referring to both parts combined. This prospectus supplement may add to, update or change information in the accompanying prospectus and the documents incorporated by reference into this prospectus supplement or the accompanying prospectus.

If information in this prospectus supplement is inconsistent with the accompanying prospectus or with any document incorporated by reference that was filed with the SEC before the date of this prospectus supplement, you should rely on this prospectus supplement. This prospectus supplement, the accompanying prospectus and the documents incorporated into each by reference include important information about us, the securities being offered and other information you should know before investing in our securities. You should also read and consider information in the documents we have referred you to in the sections of this prospectus supplement entitled “Where You Can Find Additional Information” and “Incorporation of Certain Information by Reference.”

You should rely only on this prospectus supplement, the accompanying prospectus, the documents incorporated or deemed to be incorporated by reference herein or therein and any free writing prospectus prepared by us or on our behalf. We have not, and the underwriters have not, authorized anyone to provide you with information that is in addition to or different from that contained or incorporated by reference in this prospectus supplement and the accompanying prospectus. If anyone provides you with different or inconsistent information, you should not rely on it. We and the underwriters are not offering to sell these securities in any jurisdiction where the offer or sale is not permitted. You should not assume that the information contained in this prospectus supplement, the accompanying prospectus or any free writing prospectus, or incorporated by reference herein, is accurate as of any date other than as of the date of this prospectus supplement or the accompanying prospectus or any free writing prospectus, as the case may be, or in the case of the documents incorporated by reference, the date of such documents regardless of the time of delivery of this prospectus supplement and the accompanying prospectus or any sale of our securities. Our business, financial condition, liquidity, results of operations and prospects may have changed since those dates.

All references in this prospectus supplement or the accompanying prospectus to “the Company,” “our company,” “we,” “us,” or “our” mean BioAmber Inc. and its subsidiaries, unless we state otherwise or the context otherwise requires.

No action is being taken in any jurisdiction outside the United States to permit a public offering of the securities or possession or distribution of this prospectus supplement or the accompanying prospectus in that jurisdiction. Persons who come into possession of this prospectus supplement or the accompanying prospectus in jurisdictions outside the United States are required to inform themselves about and to observe any restrictions as to this offering and the distribution of this prospectus supplement or the accompanying prospectus applicable to that jurisdiction.

S-1

WHERE YOU CAN FIND ADDITIONAL INFORMATION

We have filed with the SEC a registration statement on Form S-3 (File No. 333-215408) under the Securities Act of 1933, as amended, or the Securities Act, with respect to the securities offered by this prospectus supplement and the accompanying prospectus. This prospectus supplement and the accompanying prospectus filed as part of the registration statement do not contain all the information set forth in the registration statement and its exhibits and schedules. For further information about us, we refer you to the registration statement and to its exhibits and schedules.

We file annual, quarterly and current reports and other information with the SEC. You may read and copy any materials we file at the SEC's Public Reference Room at 100 F Street, N.E., Washington, D.C. 20549. Please call the SEC at 1-800-SEC-0330 for further information about the Public Reference Room. The SEC also maintains an internet website at www.sec.gov that contains periodic and current reports, proxy and information statements, and other information regarding registrants that file electronically with the SEC. Our common stock is listed on The New York Stock Exchange, or NYSE, and the Toronto Stock Exchange, or TSX. Reports, proxy statements and other information concerning us can also be inspected at the offices of the NYSE, 20 Broad Street, New York, New York 10005.

These documents are also available, free of charge, through the investor relations section of our website, which is located at www.bio-amber.com. Information contained on or accessible through our website is not incorporated by reference into this prospectus supplement or the accompanying prospectus and you should not consider information on or accessible through our website to be part of this prospectus supplement or the accompanying prospectus.

S-2

INCORPORATION OF CERTAIN INFORMATION BY REFERENCE

The SEC allows us to “incorporate by reference” the information we file with it, which means that we can disclose important information to you by referring you to those documents instead of having to repeat the information in this prospectus supplement and the accompanying prospectus. The information incorporated by reference is considered to be part of this prospectus supplement and the accompanying prospectus, and later information that we file with the SEC prior to the completion of this offering will automatically update and supersede this information. We incorporate by reference the documents listed below that we have filed with the SEC:

- description of our common stock contained in our Registration Statement on Form 8-A, filed on May 1, 2013;

- our Annual Report on Form 10-K for the fiscal year ended December 31, 2016, filed on March 16, 2017;

- our Quarterly Reports on Form 10-Q for the quarterly period ended March 31, 2017, filed on May 10, 2017 and for the quarterly period ended June 30, 2017, filed on August 4, 2017;

- our Current Reports on Form 8-K filed with on January 23, 2017, January 27, 2017, January 30, 2017, February 21, 2017, March 31, 2017, May 4, 2017 and May 15, 2017; and

- our Proxy Statement on Schedule 14A filed on March 31, 2017 (solely to the extent specifically incorporated by reference into our Annual Report on Form 10-K for the year ended December 31, 2016).

We also incorporate by reference into this prospectus supplement and the accompanying prospectus all documents (other than current reports furnished under Item 2.02 or Item 7.01 of Form 8-K and exhibits filed on such form that are related to such items) that are filed by us with the SEC pursuant to Sections 13(a), 13(c), 14 or

15(d) of the Securities Exchange Act of 1934, as amended, or the Exchange Act, after the date of this prospectus supplement until we sell all of the securities covered by this prospectus supplement and the accompanying prospectus or the sale of securities by us pursuant to this prospectus supplement and the accompanying prospectus is terminated.

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

You may request a copy of these documents, orally or in writing, which will be provided to you at no cost by contacting: BioAmber Inc., 1250 Rene Levesque West, Suite 4310, Montreal, Quebec, Canada H3B 4W8, or calling (514) 844-8000.

S-3

SPECIAL NOTE REGARDING FORWARD-LOOKING STATEMENTS

This prospectus supplement and the accompanying prospectus contain or incorporate by reference statements that are not historical facts and are considered forward-looking within the meaning of Section 27A of the Securities Act and Section 21E of the Exchange Act. These forward-looking statements may contain projections of our future results of operations or of our financial position or state other forward-looking information. In some cases you can identify these statements by forward-looking words such as “anticipate,” “believe,” “could,” “continue,” “estimate,” “expect,” “intend,” “may,” “should,” “will,” “would,” “plan,” “projected” or the negative of such words or other similar words or phrases. We believe that it is important to communicate our future expectations

to our investors. However, there may be events in the future that we are not able to accurately predict or control and that may cause our actual results to differ materially from the expectations we describe in our forward-looking statements. Investors are cautioned not to unduly rely on forward-looking statements because they involve risks and uncertainties, and actual results may differ materially from those discussed as a result of various factors, including, but not limited to:

- our ability to generate sufficient cash flows and obtain the additional financing we need in order to continue as a going concern and to grow our business, develop or enhance our products or respond to competitive pressures;

- the expected funding sources of our future planned manufacturing facilities and the expected timing of the completion of construction and the start of commercial operations at each of these facilities;

- the impact of the termination of our joint venture with Mitsui & Co. Ltd., or Mitsui, on our ability to maintain and expand our operations at our Sarnia, Ontario facility;

- our ability to recruit a new CEO and retain members of our senior management team;

- our offtake agreements with Vinmar International Ltd., or Vinmar, related to bio-based 1,4-butanediol, which we refer to as 1,4 BDO or BDO, tetrahydrofuran, which we refer to as THF, and bio-based succinic acid, and with PTTMCC Biochem Company Limited, or PTTMCC Biochem, for bio-succinic acid;

- the expected market applications for our products and the sizes of these addressable markets;

- our ability to gain market acceptance for bio-succinic acid, its derivatives including 1,4 BDO and THF and other building block chemicals;

- our ability to ramp up commercial sales and execute on our commercial expansion plan, including the timing and volume of our future production and sales;

the expected cost-competitiveness and relative performance attributes of our bio-succinic acid and the products derived from it;

our ability to cost-effectively produce and commercialize bio-succinic acid, its derivatives and other building block chemicals;

customer qualification, approval and acceptance of our products;

our ability to maintain and advance strategic partnerships and collaborations and the expected benefits and accessible markets related to those partnerships and collaborations;

the impact of our off-take agreements on our business with our customers, our distributors and our current and future equity partners;

our ability to economically obtain feedstock and other inputs;

the achievement of advances in our technology platform;

our ability to obtain and maintain intellectual property protection for our products and processes and not infringe on others' rights;

S-4

government regulatory and industry certification approvals for our facilities and products;

government policymaking and incentives relating to bio-chemicals;

our ability to maintain an effective system of internal controls, remediate our existing material weakness and prevent future material weaknesses or significant deficiencies from occurring; and other risks and uncertainties referenced under “Risk Factors” below and in any applicable free writing prospectus and any documents incorporated by reference herein. Readers should not place undue reliance on our forward-looking statements. These forward-looking statements speak only as of the date on which the statements were made and are not guarantees of future performance. Except as may be required by applicable law, we do not undertake or intend to update any forward-looking statements after the date of this prospectus supplement or the respective dates of documents incorporated by reference herein or therein that include forward-looking statements.

S-5

SUMMARY

This summary highlights selected information contained elsewhere or incorporated by reference in this prospectus supplement and the accompanying prospectus. This summary does not contain all the information

that you should consider before investing in our securities. You should read the entire prospectus supplement and the accompanying prospectus carefully, including “Risk Factors” contained in this prospectus supplement, the accompanying prospectus and the documents incorporated by reference herein and therein and the financial statements incorporated by reference in this prospectus supplement and the accompanying prospectus, before making an investment decision.

Overview

We are an industrial biotechnology company producing renewable chemicals. Our proprietary technology platform combines industrial biotechnology and chemical catalysis to convert biobased feedstocks into renewable chemicals that are cost-competitive replacements for petroleum-derived chemicals and are used in a wide variety of everyday products including plastics, resins, paints, food additives and personal care products. We currently sell our first product, bio-succinic acid, to customers in a variety of chemical markets. We produce bio-succinic acid at our facility in Sarnia, Ontario.

Succinic acid can be used to manufacture a wide variety of products used every day, including plastics, food additives and personal care products, and can also be used as a building block for a number of derivative chemicals. We believe that our low-cost production capability and our development of bio-succinic derived products including 1,4 BDO and THF, which are used to produce polyesters, plastics, spandex and other products, will provide us with access to a more than US\$8 billion market opportunity.

We are working to expand our accessible markets and product portfolio. We have entered into strategic relationships with several leading companies, such as our multi-year agreements with PTTMCC Biochem for bio-succinic acid and Vinmar for bio-succinic acid, 1,4 BDO and THF. We have also entered into agreements with other companies for the supply of bio-succinic acid.

We have entered into technology partnerships to lower our production costs, expand our product portfolio and broaden our biochemical production platform. For example, we entered into a technology partnership with Cargill, Inc., or Cargill, through which we exclusively license a proprietary yeast organism for use in our fermentation process to produce our products. We refer to the yeast organism that we have licensed from Cargill as “our yeast.” We have also

established other technology licenses and collaborations, including with Johnson Matthey Davy Technologies, or Davy, for the conversion of our succinic acid into 1,4 BDO and THF.

Our business strategy is to leverage the value of our technology by building and operating production facilities around the world. Depending on our access to capital and third-party demand for our technology, we may also enter into technology licenses on an opportunistic basis.

Our facility in Sarnia, Ontario has a nameplate capacity of 30,000 metric tons of bio-succinic acid per year. We started commercial scale production at our Sarnia facility in October 2015 and ramp-up to full production capacity is expected towards the end of 2018.

We are committed to managing our economic, social, environmental and ethical performance through sustainable business practices. We have completed a life cycle analysis for our facility in Sarnia, Ontario that indicates that no net carbon dioxide equivalent (greenhouse gases) will be emitted per kilogram of our bio-succinic acid produced, making our process carbon neutral. This is significantly less carbon emission intensive than the current petrochemical process for making succinic acid, in which 7.1 kilograms of carbon dioxide equivalent are emitted per kilogram of succinic acid produced. This represents a 100% reduction in greenhouse gases for our bio- succinic acid process, relative to the current petrochemical process for making succinic acid. The life cycle analysis also indicates that our facility in Sarnia consumes 64% less energy than the current petrochemical process.

S-6

We were incorporated in the State of Delaware in October 2008 as DNP Green Technology, Inc. and were established as the result of a spin-off of certain assets from Diversified Natural Products, Inc. In September 2010, we acquired the 50% interest in our joint venture Bioamber S.A.S. that we did not already own, after which, Bioamber S.A.S. became wholly owned by us. Concurrent with this acquisition, the Company changed its name from DNP Green Technology, Inc. to BioAmber Inc. and changed its fiscal year end from June 30 to December 31. Bioamber S.A.S. was wholly owned by the Company until its liquidation in December 2014.

Our principal executive offices are located at 1250 Rene Levesque West, Suite 4310, Montreal, Quebec, Canada H3B 4W8, and our principal research and development facility is located at 1000 Westgate Drive, Suite 115, St. Paul, Minnesota, United States of America, 55114. Our telephone number in the United States is (651) 641-3623 and our telephone number in Canada is (514) 844-8000. Our website address is www.bio-amber.com. We do not incorporate the information on or accessible through our website into this prospectus supplement or the accompanying prospectus, and you should not consider any information on, or that can be accessed through, our website as part of this prospectus supplement or the accompanying prospectus.

Recent Developments

BioAmber Sarnia Joint Venture Termination

On August 1, 2017, we entered into a Share Purchase Agreement with Mitsui pursuant to which we acquired Mitsui's entire 38.9% interest in the BioAmber Sarnia joint venture, increasing our ownership stake to 100%. Pursuant to the terms of the Share Purchase Agreement, our joint venture agreement with Mitsui was terminated and, with the exception of certain obligations which survive termination, Mitsui was released from its obligations and liabilities under the joint venture agreement. Although the joint venture agreement contained a put option which would have required us to purchase Mitsui's interest for a purchase price of 50% of Mitsui's equity in the joint venture, pursuant to the terms of the Share Purchase Agreement, the purchase price paid by BioAmber for Mitsui's 38.9% interest was CAD \$1.0. As further consideration for Mitsui's sale of its interest, we also entered into an Indemnity Agreement, dated August 1, 2017, pursuant to which BioAmber and, subject to the prior consents required to be obtained from its lenders, BioAmber Sarnia, have agreed to indemnify Mitsui for any payments made by Mitsui pursuant to its guarantee of our obligations under our CAD \$20.0 million commercial loan agreement with Comerica Bank, Export Development Canada and Farm Credit Canada and the other parties thereto (the "EDC Loan Agreement") and our CAD \$15.0 million loan agreement with the Minister of Economic Development and Trade of Ontario, Canada (Sustainable Jobs Innovation Fund) (the "SJIF Loan Agreement"). We also entered into a Security Agreement, dated August 1, 2017, pursuant to which BioAmber and, subject to the prior consents required to be obtained from its lenders, BioAmber Sarnia, pledged all of their personal property as security for our obligations under the Indemnity Agreement. In addition, we have agreed with Mitsui that in the event a strategic investor acquires more than 25% of BioAmber, or any investor acquires more than 25% of BioAmber Sarnia, Mitsui will be released from all liability under its guarantee obligations for the EDC Loan Agreement and the SJIF Loan Agreement. Pursuant to the Share Purchase Agreement, the members of BioAmber Sarnia's board of directors nominated by Mitsui will resign effective August 1, 2017.

Each of the Share Purchase Agreement, the Security Agreement and the Indemnity Agreement, have been filed as Exhibits 10.1, 10.2, and 10.3 to our Current Report on Form 8-K filed with the SEC on August 3, 2017. The above descriptions of the terms of the Share Purchase Agreement, the Security Agreement and the Indemnity Agreement are qualified in their entirety by reference to such exhibits.

Bridging Finance Inc. Litigation

On February 17, 2017, a claim was filed against us by Bridging Finance Inc. (“Bridging”) in the Superior Court of Justice in the Province of Ontario, Canada, seeking damages for breach of contract or, alternatively, unjust enrichment or, alternatively, on the basis of quantum meruit. The claim alleges, among other things, that we failed to pay certain prepayment penalties, interest, and waiver fees to Bridging in connection with our repayment in January 2017 of our Loan Agreement, dated September 9, 2016, with Bridging. The action seeks damages in the amount of approximately CAD\$922,000, plus prejudgment and post judgment interest, costs of the proceedings

S-7

and other relief as the court may provide. On or about April 17, 2017, we filed our Statement of Defence with the Superior Court. We believe that the suit is without merit and intend to vigorously defend it.

Concurrent Private Placement

Certain members of our senior management, including our Chief Executive Officer and Chief Financial Officer, and certain of our directors, have agreed to purchase restricted shares of our common stock and warrants, in fixed combinations, in a separate private placement concurrent with the completion of this offering at a price per fixed combination equal to the public offering price. The sale of the fixed combinations of shares of common stock and warrants in the concurrent private placement will not be registered under the Securities Act of 1933, as amended. The closing of this offering is not conditioned upon the closing of the concurrent private placement. Purchases of fixed combinations in the concurrent private placement which exceed \$250,000 in the aggregate will be subject to a commission payable to the underwriters of 3%.

S-8

THE OFFERING

The following is a brief summary of some of the terms of the offering and is qualified in its entirety by reference to the more detailed information appearing elsewhere in this prospectus supplement and the accompanying prospectus. For a more complete description of the terms of our common stock and the warrants, see the “Description of Securities” section in this prospectus supplement and the “Description of Capital Stock” section in the accompanying prospectus.

Common stock we are offering shares.

Common stock to be outstanding after this offering shares (as more fully described in the notes and the concurrent private placement following this table).

Warrants we are offering We are offering warrants to purchase shares of common stock. Each warrant has an exercise price of \$per share, is exercisable immediately upon issuance and has a term of five years from the initial exercise date. This prospectus supplement also relates to the offering of the shares of common stock issuable

upon exercise of the warrants. The warrants and shares of common stock underlying the warrants have been registered under our registration statement on Form S-3 of which this prospectus supplement and the accompanying prospectus forms a part. There is currently no market for the warrants and none is

expected to develop after this offering. We do not intend to list the warrants on any national securities exchange or other trading market. See “Description of Securities”

for additional information.

NYSE and TSX symbol Our common stock is quoted on the NYSE and the TSX under the symbol “BIOA.”

Use of proceeds We estimate that the net proceeds from this offering and the concurrent private placement will be approximately \$ million, after deducting estimated underwriting discounts and commissions and estimated offering expenses payable by us. We intend to use the net proceeds from this offering for working capital and other general corporate purposes. See “Use of Proceeds.”

Risk factors Investing in our securities involves significant risks.

Please read the information contained in or incorporated by reference under the heading “Risk Factors”

beginning on page S-13 of this prospectus supplement, and under similar headings in other documents filed after the date hereof and incorporated by reference into this prospectus supplement and the accompanying prospectus.

Concurrent Private Placement Certain members of our senior management, including our Chief Executive Officer and Chief Financial Officer, and certain of our directors, have agreed to purchase restricted shares of our common stock and

S-9

warrants, in fixed combinations, in a separate private placement concurrent with the completion of this offering at a price per fixed combination equal to the public offering price. The sale of the fixed combinations of shares of common stock and warrants in the concurrent private placement will not be registered under the Securities Act of 1933, as amended. The closing of this offering is not conditioned upon the closing of the concurrent private placement. Purchases of fixed combinations in the concurrent private placement which exceed \$250,000 in the aggregate will be subject to a commission payable to the underwriters of 3%.

The number of shares of common stock shown above to be outstanding after this offering is based on 37,142,830 shares outstanding as of June 30, 2017 and excludes:

6,897,234 shares of our common stock issuable upon the exercise of stock options outstanding as of June 30, 2017, at a weighted average exercise price of \$5.95 per share;

7,525,193 shares of our common stock reserved for future issuance under our equity incentive plans as of June 30, 2017;

2,770,081 shares of our common stock issuable upon the exercise of warrants outstanding as of June 30, 2017, at a weighted average exercise price of \$5.14 per share; and

- shares of our common stock issuable upon the exercise of warrants offered hereby and in the concurrent private placement.

Unless otherwise stated, all information contained in this prospectus supplement assumes:

no exercise of the warrants to purchase common stock sold in this offering or in the concurrent private placement; and

no exercise by the Representative of its option to purchase additional shares of common stock and/or warrants to purchase common stock in this offering.

SUMMARY CONSOLIDATED FINANCIAL DATA SUMMARY CONSOLIDATED FINANCIAL DATA

The following tables set forth summary financial data and other operating information of our company. The summary consolidated statements of operations data for the years ended December 31, 2014, 2015 and 2016 and the consolidated balance sheet data as of December 31, 2016 as set forth below are derived from our audited consolidated financial statements included in our Annual Report on Form 10-K for the fiscal year ended December 31, 2016 and incorporated by reference herein. The summary consolidated statements of operations data for the six months ended June 30, 2016 and 2017 and the consolidated balance sheet data as of June 30, 2017 have been derived from our unaudited consolidated financial statements included in our Quarterly Report on Form 10-Q for the six months ended June 30, 2017 and incorporated by reference herein. These unaudited financial statements have been prepared on a basis consistent with our audited financial statements and, in the opinion of management, reflect all adjustments, consisting only of normal and recurring adjustments, necessary for a fair presentation of such financial data. The information is only a summary and you should read it in conjunction with our audited consolidated financial statements, including the related notes, and other financial information and “Management’s Discussion and Analysis of Financial Condition and Results of Operations” included in our Annual Report on Form 10-K for the fiscal year ended December 31, 2016 and incorporated by reference herein and the Quarterly Report on Form 10-Q for the fiscal quarter ended June 30, 2017 and incorporated by reference herein. Historical results are not necessarily indicative of the results for future periods.

Consolidated Statements of Operations Data*:

	Six Months	Six Months	Year Ended	Year Ended	Year Ended
	Ended June	Ended June	December 31,	December 31,	December 31,
	30,	30,	2016	2015	2014
	2017	2016	2016	2015	2014
	(in thousands, except share and per share data)				
Revenues					
Product sales	\$6,246	\$3,980	\$ 8,272	\$ 2,172	\$ 1,543
Cost of goods sold (excluding depreciation and amortization)	9,843	6,543	13,667	2,613	6,044
Operating expenses					
General and administrative	7,805	5,609	9,458	10,594	10,655
Research and development, net(1)	3,102	3,372	7,195	20,286	15,156
Sales and marketing	1,202	1,740	2,915	4,002	4,482
Depreciation of property and equipment	2,449	2,392	4,843	1,080	260

and amortization of intangible assets
 Impairment loss and write-off of

intangible assets	—	—	—	1,141	—
Foreign exchange loss	273	146	(176)	) 984	151
Operating expenses	14,831	13,259	24,235	38,087	30,704
Operating loss	(18,428)	(15,822)	(29,630)	(38,528)	(35,205)
Amortization of deferred financing costs and					
debt discounts	1,241	1,440	3,312	1,079	292
Financial charges (income), net	(8,480)	) (7,850)	(750)	) 1,589	11,789
Grant income			(4,047)	—	—
Loss (gain) on debt extinguishment	(745)	—	—	—	171
Equity participation in losses of equity					
method Investments	\$—	\$—	\$ —	\$ 1	\$ —
Other (income) expense, net	(229)	) 172	200	(22)	) (183)
Loss before income taxes	(10,215)	(9,584)	) (28,345)	) (41,175)	) (47,274)
Income taxes	70	19	26	(4)	) 75
Net loss	\$(10,285)	\$(9,603)	) \$(28,371)	) \$(41,171)	) \$(47,349)

S-11

	Six Months	Six Months	Year Ended	Year Ended	Year Ended
	Ended June	Ended June	December	December	December
	30,	30,	31,	31,	31,
	2017	2016	2016	2015	2014
	(in thousands, except share and per share data)				
Net loss attributable to:					
BioAmber Inc. stockholders	\$ (7,033)	(6,135)	\$ (22,478)	\$ (37,226)	\$ (46,474)
Non-controlling interest	(3,252)	(3,468)	(5,893)	(3,945)	(875)
	\$ (10,285)	\$ (9,603)	\$ (28,371)	\$ (41,171)	\$ (47,349)
Net loss per share attributable to BioAmber					
Inc. stockholders—basic(2)	\$ (0.20)	\$ (0.22)	\$ (0.78)	\$ (1.52)	\$ (2.32)
Weighted-average of common stock					
outstanding—basic	35,089,745	28,481,753	28,665,645	24,499,970	20,016,180

Consolidated Balance Sheet Data (in thousands):

	As of	As of
	June 30,	December 31,
	2017	2016
Cash	\$ 5,735	\$ 16,160
Working capital	5,191	(13,883)
Total assets(3)	147,573	161,330
Long-term debt, including current portion(3)	35,194	52,331
Total liabilities(3)	43,049	75,324
Accumulated deficit	(227,801)	(220,768)
Stockholders' equity	69,024	\$ 48,491

*Slight variations in totals due to rounding.

(1) Research and development expenses include certain start-up and commissioning costs related to our Sarnia facility and are net of research and development tax credits.

(2) We have incurred losses in each of those periods. Accordingly, diluted loss per share is not presented.

S-12

RISK FACTORS

Investing in our securities involves a high degree of risk. In addition to the other information contained in this prospectus supplement to the accompanying prospectus and in the documents we incorporate by reference, you should carefully consider the risks discussed below and under the heading “Item 1A. Risk Factors” in our Annual Report on Form 10-K for the fiscal year ended December 31, 2016 and our Quarterly Report on Form 10-Q for the quarter ended June 30, 2017 before making a decision about investing in our securities. The risks and uncertainties discussed below and in our Annual Report on Form 10-K for the fiscal year ended December 31, 2016 and our Quarterly Report on Form 10-Q for the quarter ended June 30, 2017 are not the only ones facing us. Additional risks and uncertainties not presently known to us may also harm our business. If any of these risks occur, our business, financial condition and operating results could be harmed, the trading price of our common stock could decline and you could lose part or all of your investment.

Risks Related to this Offering and Our Common Stock and the Warrants

Our stock price has been and could remain volatile, which could further adversely affect the market price of our stock, our ability to raise additional capital and/or cause us to be subject to securities class action litigation.

The market price of our common stock has historically experienced and may continue to experience significant volatility. Between June 10, 2013 (the date our common stock commenced trading) and August 4, 2017, the sales price of our common stock as reported on the NYSE has fluctuated from a high of \$15.29 per share to a low of \$1.38, and on August 4, 2017, the closing sale price of our common stock as reported on the NYSE was \$1.52 per share. Our start of commercial operations of our Sarnia facility, our ability to commence commercial sales and execute on our commercial expansion plan, our quarterly operating results, our perceived prospects, changes in securities analysts’ recommendations or earnings estimates and our ability to meet such estimates, changes in general conditions in the economy or the financial markets, adverse events related to our strategic relationships, significant sales of our common stock by existing stockholders, and other developments affecting us or our competitors could cause the market price of our common stock to fluctuate substantially. In addition, in recent years, the stock market has experienced significant price and volume fluctuations. This volatility has affected the market prices of securities issued by many companies for reasons unrelated to their operating performance and may adversely affect the price of our common stock. Such market price volatility could adversely affect our ability to raise additional capital.

In addition, we may be subject to securities class action litigation as a result of volatility in the price of our common stock. On March 18, 2017, a putative securities class action was filed against us in the United States District Court for the Eastern District of New York. This action is still pending and there can be no assurance that we will prevail or that such actions will not require us to pay significant damages or a substantial settlement or expend significant resources in our defense. Moreover, there can be no assurance that other securities class actions will not be filed against us in the

future. Securities litigation could result in substantial costs and diversion of management's attention and resources and could harm our stock price, business, prospects, results of operations and financial condition.

There is no public market for the warrants to purchase common stock being offered in this offering.

There is no established public trading market for the warrants being offered in this offering, and we do not expect a market to develop. In addition, we do not intend to apply for listing of the warrants on any national securities exchange or other trading market. Without an active market, the liquidity of the warrants will be limited.

Holders of our warrants will have no rights as a common stockholder until such holders exercise their warrants and acquire our common stock.

Until you acquire shares of our common stock upon exercise of your warrants, you will have no rights with

S-13

respect to the shares of our common stock underlying such warrants. Upon exercise of your warrants, you will be entitled to exercise the rights of a common stockholder only as to matters for which the record date occurs after the exercise date.

The warrants may never have any value.

The warrants comprising part of the fixed combinations being sold in this offering, which have an exercise price of \$per whole share of common stock, will expire on the five year anniversary of the initial exercise date. In the event our common stock price does not exceed the per share exercise price of the warrants during the period when the warrants are exercisable, the warrants will not have any value.

The market price of our common stock may be adversely affected by market conditions affecting the stock markets in general, including price and trading fluctuations on the NYSE and the TSX.

Market conditions may result in volatility in the level of, and fluctuations in, market prices of stocks generally and, in turn, our common stock and sales of substantial amounts of our common stock in the market, in each case being unrelated or disproportionate to changes in our operating performance. Concerns over global stability and economic conditions in the United States and abroad have contributed to the extreme volatility of the markets which may have an effect on the market price of our common stock.

Future sales of common stock or warrants by existing stockholders could cause our stock price to decline and adversely impact the trading price of our common stock.

If our existing stockholders sell, or indicate an intent to sell, substantial amounts of our common stock or warrants in the public market, the trading price of our common stock or warrants could decline significantly and may be adversely impacted. We cannot predict the effect, if any, that future public sales of these securities or the availability of these securities for sale will have on the market and trading price of our securities. Holders of 8,488,213 shares of our common stock, including the shares of common stock issuable upon exercise of our stock options and all outstanding warrants, have the right to require us to register these shares under the Securities Act pursuant to a stockholders' agreement. If our existing stockholders sell substantial amounts of our common stock or warrants in the public market, or if the public perceives that such sales could occur, this could have an adverse impact on the market and trading price of our securities, even if there is no relationship between such sales and the performance of our business.

In the future, we may sell additional shares of our common stock to raise capital or issue stock in connection with acquisitions. In addition, a substantial number of shares of our common stock are reserved for issuance upon the exercise of warrants, stock options and the vesting of restricted stock awards. We cannot predict the size of future issuances or the effect, if any, that they may have on the market price for our common stock. The issuance and sale of

substantial amounts of common stock, or the perception that such issuances and sales may occur, could adversely affect the market price of our common stock or warrants and impair our ability to raise capital through the sale of additional equity securities.

You will experience immediate and substantial dilution in the net tangible book value per share of the common stock you purchase.

Since the offering price per fixed combination of the securities being offered is substantially higher than the net tangible book value per share of our common stock, you will suffer substantial dilution in the net tangible book value of the common stock you purchase in this offering. Based on the offering price of \$per fixed combination and the sale of shares of common stock in the concurrent private placement, and attributing no value to the warrants offered in this offering or the concurrent private placement, if you purchase shares of common stock in this offering, you will suffer immediate and substantial dilution of \$per share in the net tangible book value of the common stock. In the event that you exercise your warrants, you will experience additional dilution to the extent that the exercise price of those warrants is higher than the book value per share of our common

S-14

stock. See the section entitled “Dilution” below for a more detailed discussion of the dilution you would incur if you purchase securities in this offering.

Our financial results could vary significantly from quarter to quarter and are difficult to predict.

Our quarterly operating results may fluctuate significantly in the future. As a result of these fluctuations, we may fail to meet or exceed the expectations of research analysts covering our company or of investors, which could cause the market price of our securities to decline. Future quarterly fluctuations, many of which are beyond our control, may result from a number of factors, including but not limited to:

- the impact of the termination of our joint venture with Mitsui & Co. Ltd., or Mitsui, on our ability to maintain and expand our operations at our Sarnia, Ontario facility;

- the timing and cost associated with the construction of our additional planned manufacturing facilities;

- the level and timing of expenses for product development and sales, general and administrative expenses;

- delays or greater than anticipated expenses associated with the scale-up and the commercialization of chemicals produced using our processes;

- our ability to successfully enter into or maintain partnering arrangements, and the terms of those relationships;

- commercial success with our existing product and success in identifying and sourcing new product opportunities;

- the development of new competitive technologies or products by others and competitive pricing pressures;

- fluctuations in the prices or availability of the feedstocks required to produce chemicals using our processes or those of our competitors;

- changes in demand for our products, including any seasonal variations in demand;

-

changes in product development costs due to the achievement of certain milestones under third-party development agreements;

changes in the amount that we invest to develop, acquire or license new technologies and processes;

business interruptions, including disruptions in the production process at any facility where chemicals produced using our processes are manufactured as well as a result of changes in the technologies we employ;

departures of executives or other key management employees;

foreign exchange fluctuations;

changes in general economic, industry and market conditions, both domestically and in our foreign markets; and

changes in governmental, accounting and tax rules and regulations, environmental, health and safety requirements, and other rules and regulations.

Based on the above factors and other uncertainties, we believe our future operating results will vary significantly from quarter-to-quarter and year-to-year. As a result, quarter-to-quarter and year-to-year comparisons of operating results are not necessarily meaningful nor do they indicate what our future performance will be.

Our financial obligations are expected to continue to be substantial, and we may not obtain the additional financing we need in order to grow our business, develop or enhance our products or respond to competitive pressures.

We will need to raise additional funds in the future in order to grow our business. Any required additional

S-15

financing may not be available on terms acceptable to us, or at all. Our ability to secure financing and the cost of raising such capital are dependent on numerous factors, including general economic and capital markets conditions, credit availability from lenders, investor confidence and the existence of regulatory and tax incentives that are conducive to raising capital. Current turmoil and uncertainty in the financial markets has caused banks and financial institutions to decrease the amount of capital available for lending and has significantly increased the risk premium of such borrowings. In addition, such turmoil and uncertainty has significantly limited the ability of companies to raise funds through the sale of equity or debt securities. If we are unable to raise additional funds, obtain capital on acceptable terms, secure government grants or co-sponsorships for some of our projects or take advantage of federal and state incentive programs to secure favorable financing, we may have to delay, modify or abandon some or all of our expansion strategies.

Our ongoing operations may require us and/or our subsidiaries to raise additional funds. We may enter into agreements that may require us to expend significant financial resources during the term of such agreements. For example, we recently entered into a non-assertion agreement with Mitsubishi Chemical Corporation, pursuant to which we will be required to pay minimum annual royalties in exchange for their not asserting their patent rights. If we raise funds through the issuance of debt, the amount of any indebtedness that we may raise in the future may be substantial, and we may be required to secure such indebtedness with our assets and may have substantial interest expenses. If we default on any future indebtedness, our lenders could declare all outstanding principal and interest to be due and payable and our secured lenders may foreclose on the facilities securing such indebtedness. The incurrence of indebtedness could require us to meet financial and operating covenants, which could place limits on our operations and ability to raise additional capital, decrease our liquidity and increase the amount of cash flow required to service our debt. In addition, if we experience production problems or delays in sales that adversely affect our ability to generate revenues, we may not be able to fund principal or interest payments under any debt that we may incur. The issuance of additional equity securities could result in dilution to our stockholders and the newly-issued securities may have rights senior to those of the holders of our common stock.

Our continuation as a going concern is dependent on our ability to generate sufficient cash flows from operations and to raise additional capital to meet our obligations. Based on our current operating plan, we anticipate that the net proceeds from our public offerings, a combination of government grants, interest bearing and interest-free loans and our existing cash and cash equivalents, may not be sufficient to enable us to maintain our currently planned operations. We have no additional committed external sources of funds and additional financing may not be available when we need it or may not be available on terms that are favorable to us.

Our ability to execute our business plan is dependent on our ability to generate sufficient cash flows from operations, raise additional capital or refinance our indebtedness to meet our obligations. If adequate funds are not available to us on a timely basis, or at all, we may be unable to fund our debt service obligations and be required to reduce or delay operating and capital expenses as deemed appropriate in order to conserve cash.

We cannot assure you that we would be able to take any of these actions or that any effort to sell additional debt or equity securities would be successful or would raise sufficient funds to meet our financial obligations or finance additional facilities or that these actions would be permitted under the terms of our existing or future debt agreements. If additional financing is not available when required or is not available on acceptable terms, we may need to delay, modify or abandon our expansion strategy and we may be unable to take advantage of business opportunities or

respond to competitive pressures, which could have a material adverse effect on our offerings, revenue, results of operations and financial condition.

We have a limited operating history, a history of losses, anticipate continuing to incur losses for a period of time, and may never achieve or sustain profitability.

We have only been in existence since October 2008 and, therefore, we have a limited operating history upon which you can base your evaluation of our business. As a result, any assessments of our current business and predictions you make about our future success or viability may not be as accurate as they could have been if we had a longer operating history. Since our inception, we have incurred substantial net losses, including net losses

S-16

of \$28.4 million for the year ended December 31, 2016, \$41.2 million for the year ended December 31, 2015, and \$47.4 million for the year ended December 31, 2014. We expect these losses to continue. We expect to continue to incur substantial costs and expenses related to the continued development and expansion of our business, including those related to the development, continuation and operation of our additional manufacturing facilities, research, testing and development of new products and the growth of our sales and marketing efforts. We will need to generate and sustain increased revenues in future periods in order to become profitable. We cannot assure you that we will ever achieve or sustain profitability on a quarterly or annual basis. As of June 30, 2017, we had positive working capital of \$5.2 million, an accumulated deficit of \$227.8 million. We also had negative operating cash flows of \$18.8 million for the six months ended June 30, 2017. There can be no guarantee that our actual cash outflows will align with this expectation. If cash outflows are greater than currently expected, we may need to seek additional financing, the availability of which cannot be guaranteed.

If we are unable to continue as a going concern, our securities will have little or no value.

Our continuation as a going concern is dependent on our ability to generate sufficient cash flows from operations and to raise additional capital to meet our obligations. Specifically, we have incurred substantial net losses since our inception and we expect those losses to continue for the foreseeable future. These prior losses and expected future losses have had, and will continue to have, an adverse effect on our financial condition. In addition, our ongoing operations may require us and/or our subsidiaries to raise additional funds, and there are no assurances that such financing will be available on terms acceptable to us, or at all. Our financial statements do not include any adjustments that may result from the outcome of this uncertainty. Although we have raised additional capital since December 31, 2016 through other public offerings of our equity securities, if we are unable to generate additional funds in the future through financings, sales of our products, government grants, loans or from other sources or transactions, we will exhaust our resources and will be unable to maintain our currently planned operations. If we cannot continue as a going concern, our stockholders would likely lose most or all of their investment in us.

The termination of our joint venture with Mitsui may result in additional financial obligations and a number of other challenges that could have a material adverse effect on our business, financial condition and results of operations.

On August 1, 2017, our joint venture joint venture agreement with Mitsui was terminated and, as a result, Mitsui will no longer fund any portion of the operations at our Sarnia facility. As a result, we will need to find alternative sources of capital to carry out our activities at the Sarnia facility, which may only be available on less favorable terms. The failure to identify acceptable alternative financing could prevent us from meeting our goal of reaching full production capacity at the Sarnia facility towards the end of 2018 or at all. If we decide to seek out a new joint venture partner or partners to help finance our Sarnia facility, any new joint venture agreement we may enter into could present financial, managerial and operational challenges, including potential disputes with any new joint venture partner, additional liabilities or contingencies and other risks that would not otherwise be present if we developed the Sarnia facility alone. Any disruptions in ramping up our commercial operations at the Sarnia facility and meeting the expectations of our customers could have a material adverse effect on our results of operations.

In addition, in connection with the termination of the BioAmber Sarnia joint venture, we agreed to indemnify Mitsui for any payments it makes pursuant to its guarantees under the EDC Loan Agreement and the SJIF Loan Agreement. Any payments we make pursuant to our indemnification obligations to Mitsui may divert a significant amount of money that we could otherwise use to expand our Sarnia facility and achieve our strategic objectives.

To achieve profitability, we need to execute our manufacturing expansion strategy, including the ramp up of our facility in Sarnia, Ontario.

We are currently ramping up our first facility in Sarnia, Ontario. We expect this facility to be operating at full

S-17

capacity towards the end of 2018. We intend to build and operate additional facilities over the next three to five years. We have limited experience in operating a commercial-scale production facility, and our technology may not perform as expected in future plants. There is no guarantee that our Sarnia facility will produce at full capacity and even if we do meet these goals, we may encounter operational challenges for which we are unable to devise a workable solution or which may result in additional costs. To date, we have entered into agreements that contemplate, but do not obligate, us to supply approximately 23,000 MT of bio-succinic acid and its derivatives per year until the end of 2019, and we are actively seeking to enter into additional supply agreements. Some of these supply agreements obligate our customers to exclusively fulfill their needs for bio-succinic acid from us, contingent on our ability to meet their price and other requirements; however, there are no penalties in the event they do not purchase or we do not supply them with bio-succinic acid in the projected purchase volumes they have indicated in the agreements. Without increasing our production capacity by completing future facilities, we may not be able to meet the demands of our customers and our customer relationships and commercialization growth may suffer.

We began operations at our facility in Sarnia, Ontario in October 2015 and we may encounter substantial difficulties in ramping up commercial operations and meeting the expectations of our customers. Because we produce all of our products at our single facility, any disruptions or delays may have a material adverse effect on our business, financial condition and results of operations.

We began commissioning and start-up of our Sarnia facility in March 2015, and started operations in October 2015. Because our facility is the first of its kind, none of our employees have had any prior experience in its operation. As a result, we may experience unforeseen challenges and difficulties and, until the operations stabilize and we obtain more experience operating a commercial scale facility, the Sarnia facility may be more susceptible to start-ups, shutdowns, quality issues, or other delays or disruptions. For example, in the first months of operations at the Sarnia facility, the plant encountered some operational inefficiencies related to human errors, equipment adjustments and minor equipment failures. We cannot know with certainty when or if we will achieve optimized operations. The skills and knowledge gained in operating our large-scale demonstration facility in Pomacle, France may prove insufficient for successful operation of a larger-scale commercial facility, and we may be required to expend significant time and resources to develop our capabilities in commercial facility operations. We may also need to hire new employees or contract with third parties to help manage our operations, and our performance may suffer if we are unable to hire qualified parties or if they perform poorly.

Our operations at our Sarnia, Ontario facility may be adversely affected by changes and events, including the following:

- loss of key talent, including technical and administrative personnel, in operating the facility;

- failure to maintain or timely renew regulatory approvals, including environmental;

- issues with the quality of our products produced at the facility;

- shortages or changes in the price of equipment, materials or labor and related budget overruns;
- adverse changes in the political and/or regulatory environment;
- adverse weather conditions or natural disasters, accidents or other unforeseen events;
- insufficient capital to continue operations at the facility and the inability to obtain additional financing on satisfactory terms or at all;
- workplace health and safety issues at the facility;
- costs associated with the external processing of our co-products;

S-18

issues associated with our environmental emissions, effluents, air and noise; and

failure of a key piece of equipment, particularly one with long lead time delivery.

Currently, our only production site is our Sarnia facility. As a result, significant and prolonged disruptions at the facility would have a material adverse effect on our business, financial condition and results of operations. Our operations also may be disrupted by external events such as natural disasters, severe weather conditions, workplace or environmental accidents, mechanical failure, fires, explosions, interruptions of supply, work stoppage, losses of permits or authorizations or acts of terrorism. Some of these events can cause personal injury and loss of life, severe damage to or destruction of property and equipment and environmental damage, and may result in suspension or cessation of operations and the imposition of civil or criminal penalties. Our facilities and the manufacturing equipment we use would be very costly to replace and could require substantial lead time to repair or replace. In addition, telecommunications failures or other systems interruptions, such as computer viruses or other cyber-attacks, at any of the locations in which we do business could significantly disrupt our operations, laboratory processes and delay shipments to our customers. We can provide no assurance that we will not incur losses related to these or other events beyond the limits or outside the coverage of our insurance policies. Further, disruptions to our operations could have a material adverse effect on our business and results of operations during the period of time that the facility is not operating.

In addition, we may also experience difficulties in producing sufficient quantities or quality of products or in achieving sufficient quality and manufacturing yield levels. Our Sarnia facility is also subject to risks associated with having single suppliers for certain key inputs, such as sugar, power and steam, so the failure of any of these suppliers to perform as expected, would also have a material adverse effect on our performance and results of operations. If we are unable to successfully operate and manage our manufacturing operations at our Sarnia facility or otherwise fail to meet our manufacturing needs, we may not be able to provide our customers with the quality or quantity of products they require, and thus could lose customers and suffer reduced revenues which may have a material adverse effect on our results of operations.

Our failure to comply with milestone covenants contained in certain of our agreements, including certain debt instruments, government grants and government loans, could result in events of default, and if not cured, would require their accelerated or immediate repayment, in which case our assets and cash flow are likely to be insufficient to make such repayments or fund our manufacturing expansion strategy.

The terms of our debt instruments require us to comply with various milestone covenants related to the start-up of our facility in Sarnia, Ontario. A breach of any of these covenants could result in an event of default under one or more of these debt instruments which, if not cured or waived, could give the holders of the defaulted indebtedness the right to terminate commitments to lend and cause all amounts outstanding with respect to the indebtedness to be due and payable immediately. We are also party to certain agreements with governmental entities that provide grants and loans and private lenders in connection with the operation of our Sarnia facility. If we fail to meet any of the covenants contained in these grant and loan agreements, we may be forced to repay grants received, the repayment of the loans may be accelerated. In addition, in connection with the termination of our joint venture agreement with Mitsui, (i) we

entered into an Indemnity Agreement, pursuant to which we and BioAmber Sarnia have agreed to indemnify Mitsui for any payments it makes pursuant to its guarantee of our obligations under the EDC Loan Agreement and the SJIF Loan Agreement; (ii) we entered into a Security Agreement pursuant to which we and BioAmber Sarnia agreed to pledge all of our personal property as security for our indemnification under the Indemnity Agreement; and (iii) we agreed with Mitsui that in the event a strategic investor acquires more than 25% of BioAmber, or any investor acquires more than 25% of BioAmber Sarnia, Mitsui will be released from all liability under its guarantee obligations for the EDC Loan Agreement and the SJIF Loan Agreement. The above-described provisions of our agreements with Mitsui remain subject to the prior consent of our lenders and there can be no assurance that such consent will be obtained or that our lenders will not seek to modify, accelerate or terminate our loan agreements. If we are forced to repay government grants, accelerate the repayment of our loans or if any of our loans are terminated, our assets and cash flow are likely to be insufficient to make such repayments or fund our manufacturing expansion strategy.

S-19

We are dependent on our relationships with strategic partners, licensors, collaborators and other third parties for research and development, the funding, construction and operation of our manufacturing facilities and the commercialization of our products. The failure to manage these relationships could delay or prevent us from developing and commercializing our products.

We have built our business largely by forming technology partnerships and licensing and other relationships with market leaders in the industrial biotechnology and chemicals industries. For example, through an exclusive worldwide license from Cargill, we have developed a next generation yeast microorganism. In addition, we have developed a proprietary purification process that we believe will provide a key cost differentiator to our competitors by reducing the cost profile of our products and the capital intensity of our plants. We have also entered into license agreements with Davy for the conversion of succinic acid to BDO and THF. We expect that our ability to maintain and manage these collaborations will be significant factors in the success of our business.

Our ability to maintain and manage partnerships for the funding, construction and operation of our manufacturing facilities is a significant factor in the success of our business. If we lose a strategic partner, we may experience delays in developing and commercializing our products. On August 1, 2017, our joint venture with Mitsui terminated and, as a result, we will no longer have access to Mitsui as a source of funding.

We are working with our other strategic partners and collaborators through whom we either own or license the technology needed to develop new specialty chemical products. We will rely on these partners to commercialize our products and the success of these relationships will impact the market opportunity and demand for our products across our target end-markets.

Our partnering or collaboration opportunities could be harmed and our anticipated timelines could be delayed if:

- we do not achieve our objectives under our arrangements in a timely manner, or at all
- our existing or potential industry partners become unable, unwilling or less willing to expend their resources on research and development or commercialization efforts with us due to general market conditions, their financial condition, feedstock pricing or other circumstances, many of which are beyond our control
- we disagree with a strategic partner or collaborator regarding strategic direction, economics of our relationship, intellectual property or other matters

• we are unable to successfully manage multiple simultaneous partnering arrangements

• our strategic partners and collaborators breach or terminate their agreements with us or fail to perform their agreed activities or

• make planned equity contributions

• our industry partners become competitors of ours or enter into agreements with our competitors

- applicable laws and regulations, domestic or foreign, impede our ability to enter into strategic arrangements

• we develop processes or enter into additional partnering arrangements that conflict with the business objectives of our other arrangements or

• consolidation in our target markets limits the number of potential industry partners.

S-20

If any of these events occur, or if we fail to maintain our agreements with our strategic partners and collaborators, we may not be able to commercialize our existing and future products, further develop our business or generate sufficient revenues to support our operations. Additionally, our business could be negatively impacted if any of our industry partners undergo a change of control or assign the rights or obligations under any of our agreements.

We have entered into certain non-binding letters of intent, memoranda of understanding and other arrangements with future customers and others, and cannot assure you that such arrangements will lead to definitive agreements, which could harm our commercial prospects. Even if we do enter into definitive agreements, the rights and obligations of the parties may be modified in the future.

We have entered into non-binding letters of intent, memoranda of understanding and other arrangements with future customers and others. We have also entered several non-binding memoranda of understanding with third parties related to our product development efforts. We cannot assure you that we will be able to negotiate final terms and enter into definitive agreements with any of our future customers or others in a timely manner, or at all, and there is no guarantee that the terms of any final, definitive, binding agreement will be favorable to us or reflect the terms currently contemplated under the letters of intent, memoranda of understanding and other arrangements we have. Delays in negotiating final, definitive, binding agreements could slow the development and commercialization of the products in our pipeline, which could prevent us from growing our business, result in wasted resources and cause us to consume capital significantly faster than we currently anticipate.

We have signed a binding 15-year offtake agreement for 1,4 BDO and THF with Vinmar, under which Vinmar has committed to purchase 100% of the BDO and THF produced in our next plant, a 100,000 MT per year capacity plant that we plan to build in North America and commission by 2021. Vinmar also plans to invest in the BDO plant alongside us. Following the financing, construction and commissioning of the 100,000 MT BDO and THF plant, Vinmar will be obligated to purchase 100% of the BDO and THF produced there for 15 years, and we will be obligated to sell exclusively to Vinmar. As part of the agreement, Vinmar has a right of first refusal to invest in and secure 100% of the offtake from a second BDO plant that we would build in the future. While this agreement is binding, our inability to finance and construct the BDO plant would relieve Vinmar of its obligation to purchase BDO and THF under the terms of the offtake agreement.

On December 22, 2016, we entered into an amendment to this offtake agreement with Vinmar for 1,4 BDO and THF extended the deadline for achieving the financial close to December 31, 2018. We have signed a second offtake agreement in July 2014 with Vinmar that covers our next plant, which will have an annual nameplate capacity of 70,000 MT per year of bio-succinic acid, with Vinmar committed to off-taking 50,000 MT of the bio-succinic acid produced there for 15 years. Vinmar has also committed to offtake 150,000 MT of the production from our third plant, which has a planned nameplate capacity of 200,000 MT per year. On December 22, 2016, we entered into an amendment to this offtake agreement for bio-succinic acid, which terminated the portion of the offtake agreement related to our Sarnia facility in connection with entering into our non-binding letter of intent with CJCJ, pursuant to which such termination is a requirement of the definitive agreements contemplated by the non-binding letter of intent.

In addition, Mitsui, our former joint venture partner, began taking a more active role in the commercialization of bio-succinic acid in Asia in the spring of 2016. Mitsui has informed us, and we believe, that the continuation of the Vinmar arrangement has resulted in channel conflict and presented difficulty for Mitsui to develop the market for bio-succinic acid in Asia in parallel with Vinmar's efforts. We believe that such channel conflict would be exacerbated as CJCJ begins to sell bio-succinic acid in China and Korea as part of its pre-marketing efforts for our proposed China joint venture. In our original agreement, the second and third bio-succinic acid plants had December 31, 2016 and December 31, 2019 deadlines respectively for achieving a financial close. The amendment extended the deadlines for achieving the financial close of the second and third plants to December 31, 2018 and December 31, 2020, respectively. The amendment also removed the predefined production volume and offtake for the second and third bio-succinic acid plants. Vinmar and BioAmber must now agree to the bio-succinic acid capacity and offtake volume of plants two and three, taking into account global supply and demand dynamics. The failure of the parties to agree would allow either party to terminate the portion of the offtake agreement related to the plant in question.

S-21

On December 16, 2016, we entered into a non-binding letter of intent with CJ Cheiljedang Corporation (“CJ CJ”). Until December 31, 2017, we and CJ Cheiljedang Corporation have entered into an exclusivity period in which we may not discuss, evaluate or enter into binding or non-binding agreements with any third parties in connection with a retrofit of an existing fermentation facility to produce bio-succinic acid using our low pH technology or to build new bio-succinic acid capacity in China or South Korea. Similarly, CJ Cheiljedang Corporation may not discuss, evaluate or enter into binding or non-binding agreements in connection with the research, development, manufacture or marketing of bio-succinic acid. Under the terms of the agreement, we and CJ CJ plan to establish a joint venture in China to produce up to 36,000 metric tons of bio-succinic acid annually and commercialize the output in Asia.

The letter contemplates the retrofitting of an existing CJ CJ fermentation facility with our succinic acid technology. CJ CJ would incur all capital costs required to retrofit its fermentation facility, including the capital needed during plant commissioning and startup, and production is expected to begin in the second quarter of 2018. The joint venture could subsequently expand production capacity through debottlenecking and/or additional investment. CJ CJ is expected to own 65% of the JV and we are expected to own 35%. The JV would pay us a technology access fee for our bio-succinic acid technology, and pay CJ CJ a tolling fee for producing bio-succinic acid on its behalf. The joint venture is subject to certain conditions, including technical and commercial due diligence, with the definitive agreements expected to be signed by November 2017. There is no guarantee that we are able to enter into definitive agreements for this collaboration on the terms contemplated in the letter of intent or at all.

We will have broad discretion in how we use the net proceeds of this offering and the concurrent private placement. We may not use these proceeds effectively, which could affect our results of operations and cause our stock price to decline.

We will have considerable discretion in the application of the net proceeds of this offering and the concurrent private placement. We currently intend to use the net proceeds from this offering and the concurrent private placement for working capital and other general corporate purposes. As a result, investors will be relying upon management’s judgment with only limited information about our specific intentions for the use of the net proceeds of this offering and the concurrent private placement. We may use the net proceeds for purposes that do not yield a significant return or any return at all for our stockholders. In addition, pending their use, we may invest the net proceeds from this offering and the concurrent private placement in a manner that does not produce income or that loses value.

Provisions of Delaware law and our charter documents could delay or prevent an acquisition of our company and could make it more difficult for you to change management.

Provisions of our amended and restated certificate of incorporation and amended and restated by-laws may discourage, delay or prevent a merger, acquisition or other change in control that stockholders may consider favorable, including transactions in which stockholders might otherwise receive a premium for their shares. These provisions

may also prevent or delay attempts by stockholders to replace or remove our current management or members of our board of directors. These provisions include:

- a classified board of directors;
- limitations on the removal of directors;
- advance notice requirements for stockholder proposals and nominations;
- the inability of stockholders to act by written consent or to call special meetings;
- the ability of our board of directors to make, alter or repeal our amended and restated by-laws; and
- the authority of our board of directors to issue “blank check” preferred stock, the terms of which may be established and the shares of which may be issued without stockholder approval.

S-22

The affirmative vote of the holders of not less than 75% of our shares of capital stock entitled to vote, and not less than 75% of the outstanding shares of each class entitled to vote thereon as a class, is generally necessary to amend or repeal the above provisions that are contained in our amended and restated certificate of incorporation. Also, absent approval of our board of directors, our amended and restated by-laws may only be amended or repealed by the affirmative vote of the holders of at least 75% of our shares of capital stock entitled to vote.

In addition, we are subject to the provisions of Section 203 of the Delaware General Corporation Law, which limits business combination transactions with stockholders of 15% or more of our outstanding voting stock that our board of directors has not approved. These provisions and other similar provisions make it more difficult for stockholders or potential acquirers to acquire us without negotiation. These provisions may apply even if some stockholders may consider the transaction beneficial to them.

As a result, these provisions could limit the price that investors are willing to pay in the future for shares of our common stock. These provisions might also discourage a potential acquisition proposal or tender offer, even if the acquisition proposal or tender offer is at a premium over the then current market price for our common stock.

We do not intend to pay cash dividends. We have never paid dividends on our capital stock and we do not anticipate paying any dividends in the foreseeable future. Consequently, any gains from an investment in our securities will likely depend on whether the price of our common stock increases.

We have not paid dividends on any of our capital stock to date and we currently intend to retain our future earnings, if any, to fund the development and growth of our business. As a result, capital appreciation, if any, of our common stock will be your sole source of gain for the foreseeable future. Consequently, in the foreseeable future, you will likely only experience a gain from your investment in our securities if the price of our common stock increases.

We have incurred and will continue to incur significant increased costs as a result of operating as a public company and our management is required to devote substantial time to new compliance initiatives.

As a public company and particularly after we cease to be an “emerging growth company” (and cease to take advantage of certain exceptions from reporting requirements that are available under the Jumpstart Our Business Startups Act of 2012, or the JOBS Act, as an “emerging growth company”), we incurred and will incur significant legal, accounting, administrative and other costs and expenses that we did not face as a private company. As a public company, we are subject to rules and regulations that regulate corporate governance practices of public companies, including the Securities Exchange Act of 1934, as amended, or the Exchange Act, the Sarbanes-Oxley Act of 2002, as amended, or the Sarbanes-Oxley Act, as well as rules promulgated by the Canadian Securities Administrators, the NYSE and the TSX. The compliance with these public company requirements increased and will increase our costs and make some activities more time consuming and may result in a diversion of management’s time and attention from

revenue-generating activities. For example, we created new board committees, adopted new internal controls and disclosure controls and procedures, and devoted significant management resources to our Securities and Exchange Commission reporting requirements. A number of those requirements will require us to carry out activities we have not performed previously. Furthermore, if we are unable to maintain our internal controls and accounting capabilities or subsequently identify any issues in complying with those requirements (for example, if we or our registered public accounting firm identify a material weakness or significant deficiency in our internal control over financial reporting), such as that identified in connection with the preparation of our condensed consolidated financial statements for the year ended December 31, 2016, we could incur additional costs rectifying those issues, and the existence of those issues could adversely affect us, our reputation or investor perceptions of us. The additional reporting and other obligations imposed on us by these rules and regulations increased our legal and financial compliance costs and the costs of our related legal, accounting and administrative activities significantly. These increased costs required and will continue to require us to divert a significant amount of money that we could otherwise use to expand our business and achieve our strategic objectives.

S-23

We are an “emerging growth company” and have elected to take advantage of reduced reporting requirements applicable to emerging growth companies, which could make our securities less attractive to investors.

We are an “emerging growth company,” as defined in the JOBS Act, and we have elected to take advantage of certain exemptions from various reporting requirements that are applicable to other public companies that are not emerging growth companies, including, but not limited to, not being required to comply with the auditor attestation requirements of Section 404 of the Sarbanes-Oxley Act, or Section 404, reduced disclosure

obligations regarding executive compensation in our periodic reports and proxy statements, exemptions from the requirements of holding a nonbinding advisory vote on executive compensation and shareholder approval of any golden parachute payments not previously approved, and delaying the adoption of new or revised accounting standards until they are applicable to private companies. As a result of our election to use the extended transition period provided in Section 7(a)(2)(B) of the Securities Act, our financial statements may not be comparable to companies that comply with new or revised accounting standards on the relevant dates on which adoption of such standards is required for companies that comply with public company effective dates. We cannot predict if investors will find our securities less attractive as a result of our choice to rely on these exemptions. If some investors find our securities less attractive as a result, there may be a less active trading market for our securities and the market price of our securities may be more volatile.

We will remain an “emerging growth company” for up to five years after our initial public offering, or until the earliest of (i) the last day of the first fiscal year in which our annual gross revenues exceed \$1 billion, (ii) the date that we become a “large accelerated filer” as defined in Rule 12b-2 under the Exchange Act, which would occur if the market value of our common stock that is held by non-affiliates exceeds \$700 million as of the last business day of our most recently completed second fiscal quarter, or (iii) the date on which we have issued more than \$1 billion in non-convertible debt during the preceding three year period.

We expect to enter into collective bargaining with the employees of BioAmber Sarnia, and the results of this process are uncertain.

Following an application for certification recently received and a vote recently held, it is expected that the employees of BioAmber Sarnia Inc., the owner of our Sarnia facility, will be unionized in the province of Ontario, Canada, subject to the negotiation and execution of a collective bargaining agreement between BioAmber Sarnia Inc. and the union having filed the application for certification. We may commence negotiations of a collective bargaining agreement in the near future. Any labor-related work stoppage by unionized employees, or employees who become unionized in the future, could limit our ability to operate our business and could increase costs. Any significant increase in labor costs, deterioration of employee relations, slowdowns or work stoppages at our Sarnia facility, whether due to union activities, employee turnover or otherwise, could have a material adverse effect on our financial condition, cash flows and results of operations.

If we fail to augment and maintain an effective system of internal controls, we might not be able to report our financial results accurately or prevent fraud. In that case, our stockholders could lose confidence in our financial reporting, which would harm our business and could negatively impact the price of our securities.

Our management is required to deliver a report that assesses the effectiveness of our internal control over financial reporting. Additionally, Section 404 may require our auditors to deliver an attestation report on the effectiveness of our internal controls over financial reporting in conjunction with their opinion on our audited financial statements beginning with the second annual report that we will be required to file with SEC. However, we have elected to take advantage of certain exceptions from reporting requirements that are available to “emerging growth companies” under the JOBS Act and therefore we will not be required to make our first annual assessment of our internal control over financial reporting pursuant to Section 404 until after the date we are no longer an “emerging growth company” as defined in the JOBS Act, which may be up to five years from our initial public offering.

S-24

The process of designing and implementing effective internal controls and procedures, and expanding our internal accounting capabilities, is a continuous effort that requires us to anticipate and react to changes in our business and the economic and regulatory environments and to expend significant resources to establish and maintain a system of internal controls that is adequate to satisfy our reporting obligations as a public company. The standards that must be met for management to assess the internal control over financial reporting as effective are complex, and require significant documentation, testing and possible remediation to meet the detailed standards. We cannot be certain at this time whether we will be able to successfully complete the implementation of controls and procedures or the certification and attestation requirements of Section 404. In connection with the preparation of our consolidated financial statements for the year ended December 31, 2016 and our condensed consolidated financial statements for the quarter ended September 30, 2015, we identified a material weakness in internal control over financial reporting that, if not corrected, could result in a material misstatement in our financial statements. See the risk factor in our Annual Report on Form 10-K for the fiscal year ended December 31, 2016 entitled “—We identified a material weakness in our internal control over financial reporting as of December 31, 2016 and as of September 30, 2015 and we may identify additional material weaknesses in the future that may cause us to fail to meet our reporting obligations or result in material misstatements of our financial statements. If we fail to remediate any material weaknesses or if we otherwise fail to establish and maintain effective control over financial reporting, our ability to accurately and timely report our financial results could be adversely affected.” In the future we may have significant deficiencies, which could cause us to fail to meet the periodic reporting obligations that we will be subject to under Section 404 or result in material misstatements in our financial statements. If we identify and report a material weakness or any additional significant deficiencies, it could adversely affect our stock price.

Loss of key personnel or our inability to attract and retain additional key personnel could harm our research and development efforts, delay launch of new products and impair our ability to meet our business objectives.

Our business involves complex operations spanning a variety of disciplines that demands a management team and employee workforce that is knowledgeable in the many areas necessary for our operations. While we have been successful in attracting many experienced, skilled professionals to our company, the loss of key members of our management team or key research and development or operational employees, or the failure to attract and retain additional such employees, could slow our development and commercialization of our products for our target markets and executing our business plans. For example, we have recently experienced a number of changes in our executive leadership. Specifically, Jean-Francois Huc resigned as our President and Chief Executive Officer effective February 17, 2017, and also resigned as a member of our Board of Directors effective May 12, 2017. On May 11, 2017, George F.J. Gosbee also informed the Board of Directors that he had decided to resign as a director of the Company, and from each of the board committees on which he served, effective immediately. In addition, on March 28, 2017, Mario Saucier resigned as our Chief Financial Officer. Over the years, we have been dependent upon the leadership and experience of such individuals and their understanding of our company and no assurances can be made that such resignations will not have an adverse effect on our business, financial condition and results of operations.

In addition, we may not be able to attract or retain qualified employees due to the intense competition for qualified personnel among biotechnology and other technology-based businesses and the scarcity of personnel with the qualifications or experience necessary for our business. Hiring, training and successfully integrating qualified personnel into our operation is a lengthy and expensive process. The market for qualified personnel is very competitive because of the limited number of people available with the necessary technical skills and understanding of our technology and anticipated products. If we are not able to attract and retain the necessary personnel to accomplish our business objectives, we may experience staffing constraints that will adversely affect our ability to support our internal research and development programs or satisfy customer demands for our products. In particular, our product development and research and development programs are dependent on our ability to attract and retain highly skilled

scientific, technical and operational personnel. Competition for such personnel from numerous companies and academic and other research institutions may limit our ability to do so on acceptable terms, or at all. Substantially all of our employees are at-will employees, which means that either the employee or we may terminate their employment at any time.

S-25

If securities or industry research analysts cease publishing research or reports about our business or if they issue unfavorable commentary or downgrade our common stock, the market price of our securities and trading volume could decline.

The trading market for our securities relies in part on the research and reports that securities and industry research analysts publish about us, our industry and our business. We do not have any control over these analysts. The market price of our securities and trading volumes could decline if one or more securities or industry analysts downgrade our securities, issue unfavorable commentary about us, our industry or our business, cease to cover our company or fail to regularly publish reports about us, our industry or our business.

S-26

USE OF PROCEEDS

We estimate that the net proceeds from this offering and the concurrent private placement will be approximately \$million, after deducting estimated underwriting discounts and commissions and estimated offering expenses payable by us. We intend to use the net proceeds from this offering for working capital and other general corporate purposes.

S-27

DILUTION

If you invest in our common stock and warrants, you will experience dilution to the extent of the difference between the public offering price per fixed combination (attributing no value to the warrants) and the net tangible book value per share of our common stock immediately after this offering.

Our net tangible book value as of June 30, 2017, was approximately \$97.4 million, or \$2.62 per share of our common stock, based upon 37,142,830 shares of our common stock outstanding as of that date. Net tangible book value per share is determined by dividing our total tangible assets, less total liabilities, by the number of shares of our common stock outstanding as of June 30, 2017. Dilution in net tangible book value per share represents the difference between the amount per share paid by purchasers of shares of common stock in this offering and the net tangible book value per share of our common stock immediately after this offering.

After giving effect to the sale of (i) shares of our common stock and warrants to purchase up to shares of common stock in this offering and (ii) shares of our common stock and warrants to purchase up to shares of common stock in the concurrent private placement, at the public offering price of \$ per combination, and after deducting the estimated underwriting discounts and commissions and estimated offering expenses payable by us, and excluding the proceeds, if any, from the exercise of warrants in this offering and in the private placement, our as adjusted net tangible book value as of June 30, 2017, would have been approximately \$ million, or \$ per share. This represents an immediate increase in net tangible book value of \$ per share to existing stockholders and immediate dilution in net tangible book value of \$ per share to new investors purchasing our common stock and warrants in this offering and in the concurrent private placement at the public offering price. The following table illustrates this dilution on a per share basis:

Offering price per fixed combination	\$
Net tangible book value per share as of June 30, 2017	\$2.62
Increase in net tangible book value per share attributable to new investors	\$
As adjusted net tangible book value per share as of June 30, 2017 after giving effect to	
this offering	\$
Dilution in net tangible book value per share to investors in this offering	\$

The foregoing table and discussion is based on 37,142,830 shares outstanding as of June 30, 2017 and excludes:

6,897,234 shares of our common stock issuable upon the exercise of stock options outstanding as of June 30, 2017, at a weighted average exercise price of \$5.95 per share;

Edgar Filing: BioAmber Inc. - Form 424B5

7,525,193 shares of our common stock reserved for future issuance under our equity incentive plans as of June 30, 2017;

2,770,081 shares of our common stock issuable upon the exercise of warrants outstanding as of June 30, 2017, at a weighted average exercise price of \$5.14 per share; and

- shares of our common stock issuable upon the exercise of warrants offered hereby and in the concurrent private placement.

S-28

The above illustration of dilution per share to investors participating in this offering assumes no exercise of outstanding options to purchase our common stock or outstanding warrants to purchase shares of our common stock. The exercise of outstanding options and warrants having an exercise price less than the offering price will increase dilution to new investors. In addition, we may choose to raise additional capital depending on market conditions, our capital requirements and strategic considerations, even if we believe we have sufficient funds for our current or future operating plans. To the extent that additional capital is raised through the sale of equity or convertible debt securities, the issuance of these securities could result in further dilution to our stockholders.

S-29

CAPITALIZATION

The following table sets forth our cash and capitalization as of June 30, 2017:

on an actual basis;

on an as adjusted basis to give effect to our sale in this offering of shares of common stock and warrants to purchase shares of common stock and our sale in the concurrent private placement of shares of common stock and warrants to purchase shares of common stock, at \$ per combination, and after deducting estimated underwriting discounts and commissions and estimated offering expenses payable by us.

You should read this table in conjunction with “Use of Proceeds” as well as our “Management’s Discussion and Analysis of Financial Condition and Results of Operations” and our consolidated financial statements, including the related notes, incorporated by reference into this prospectus supplement and the accompanying prospectus.

	As of June 30, 2017	
	As	Adjusted
	Actual	(unaudited)
	(in thousands, except share and	
	per share data)	
Cash(1)	\$5,735	\$
Debt:		
Long term debt, including current portion	35,194	
Warrants financial liability	1,469	
Redeemable non-controlling interest	35,501	
Stockholders’ equity:		
Preferred stock, par value \$0.01 per share; 5,000,000 authorized, zero		
shares issued or outstanding, actual and as adjusted	—	
Common stock, par value \$0.01 per share; 250,000,000 shares		
authorized; 37,142,830 shares issued and outstanding, actual,		
and shares issued and outstanding, as adjusted (2)	371	
Additional paid-in capital	306,521	
Warrants	590	
Accumulated deficit	(227,801)	
Accumulated other comprehensive loss	(10,658)	
Total stockholders’ equity	69,023	
Total capitalization	\$141,187	\$

(1) Does not include approximately \$577,725 (CAD \$750,000) of restricted cash classified separately on the balance sheet at June 30, 2017, which is held in an escrow account as a guarantee pursuant to a steam supply agreement with Arlenxio Inc.

(2) The number of shares of our common stock in the table above excludes:

6,897,234 shares of our common stock issuable upon the exercise of stock options outstanding as of June 30, 2017, at a weighted average exercise price of \$5.95 per share;

7,525,193 shares of our common stock reserved for future issuance under our equity incentive plans as of June 30, 2017;

2,770,081 shares of our common stock issuable upon the exercise of warrants outstanding as of June 30, 2017, at a weighted average exercise price of \$5.14 per share; and

- shares of our common stock issuable upon the exercise of warrants offered hereby and in the concurrent private placement.

S-30

PRICE RANGE OF COMMON STOCK AND WARRANTS

Our common stock trades on the NYSE and the TSX under the symbol “BIOA.” The warrants sold as part of our May 9, 2013 initial public offering previously traded on the NYSE under the symbol “BIOA.WS” from June 10, 2013, when the units issued in our initial public offering were split into common stock and warrants, through May 9, 2017, when such warrants expired. Upon expiration, the warrants were delisted. The following table shows the high and low sale prices per share of our common stock and per warrant as reported on the NYSE for the periods indicated:

	Common Stock		Warrants	
	High	Low	High	Low
Year ending December 31, 2017				
1st Quarter	\$6.24	\$2.10	\$1.00	\$0.03
2nd Quarter	\$2.88	\$1.88	\$0.05	\$0.01
3rd Quarter (until August 4, 2017)	\$2.74	\$2.02	—	—
Year ended December 31, 2016				
1st Quarter	\$6.59	\$2.86	\$2.00	\$0.69
2nd Quarter	\$4.80	\$2.86	\$1.71	\$0.30
3rd Quarter	\$4.33	\$2.99	\$0.50	\$0.18
4th Quarter	\$6.50	\$3.55	\$1.00	\$0.21
Year ended December 31, 2015				
1st Quarter	\$9.99	\$7.43	\$1.88	\$1.40
2nd Quarter	\$11.30	\$8.10	\$2.41	\$1.41
3rd Quarter	\$8.72	\$4.64	\$2.19	\$1.51
4th Quarter	\$8.92	\$4.97	\$2.03	\$1.20
Year ended December 31, 2014				
1st Quarter	\$15.05	\$7.37	\$3.13	\$0.75
2nd Quarter	\$12.99	\$9.05	\$2.88	\$1.68
3rd Quarter	\$15.29	\$9.66	\$2.79	\$2.20
4th Quarter	\$10.80	\$7.38	\$2.74	\$0.80
Year ended December 31, 2013				
2nd Quarter (beginning June 10, 2013)(1)	\$8.29	\$6.30	\$1.00	\$0.15
3rd Quarter	\$7.75	\$3.96	\$0.99	\$0.50
4th Quarter	\$8.23	\$4.98	\$1.14	\$0.51

(1) From May 10, 2013 through June 7, 2013 our units traded on the NYSE under the symbol "BIOA.U." The high and low sales prices per unit as reported on the NYSE during the period May 10, 2013 through June 7, 2013 were \$10.05 and \$7.01, respectively.

On August 4, 2017, the last reported sale price for our common stock on the NYSE was \$1.52 per share. As of August 4, 2017, there were approximately 99 record holders of our common stock.

S-31

DIVIDEND POLICY

We have never paid or declared any cash dividends on our common stock. We currently intend to retain any cash flow to finance the growth and development of our business, and we do not expect to pay any cash dividends on our common stock in the foreseeable future. Payment of future dividends, if any, will be at the discretion of our board of directors and will depend on our financial condition, results of operations, capital requirements, restrictions contained in current or future financing instruments and other factors our board of directors deems relevant. In addition, our credit facility contains covenants limiting our ability to pay dividends on our capital stock. Investors should not purchase our warrants with the expectation of receiving dividends.

S-32

DESCRIPTION OF SECURITIES

In this offering, we are offering shares of common stock and warrants to purchase up to shares of common stock. This prospectus supplement also relates to the offering of shares of our common stock upon the exercise, if any, of the warrants issued in this offering.

Common Stock

Our authorized capital stock consists of 250,000,000 shares of common stock, \$0.01 par value per share, and 5,000,000 shares of preferred stock, \$0.01 par value per share. As of June 30, 2017, there were 37,142,830 shares of our common stock outstanding and warrants issued prior to our initial public offering, or legacy warrants, to purchase 651,659 shares of our common stock outstanding.

The material terms and provisions of our common stock are described under the caption “Description of Capital Stock” starting on page 16 of the accompanying prospectus.

Warrants

The material terms and provisions of the warrants to purchase shares of common stock being offered pursuant to this prospectus supplement and the accompanying prospectus are summarized below. This summary is subject to and qualified in its entirety by the form of warrant, which will be provided to each investor in this offering and will be filed on a Current Report on Form 8-K in connection with this offering.

General Terms of the Warrants

The warrants to be issued in this offering represent the rights to purchase up to shares of common stock at an initial exercise price of \$ per share. Each warrant may be exercised at any time beginning immediately upon issuance and from time to time thereafter through and including the five year anniversary of the initial exercise date.

Anti-Dilution Protection

The warrants contain full ratchet anti-dilution protection upon the issuance of any common stock, securities convertible into common stock or certain other issuances at a price below the then-existing exercise price of the warrants, with certain exceptions.

Exercise

Holders of the warrants may exercise their warrants to purchase shares of our common stock on or before the expiration date by delivering (i) notice of exercise, appropriately completed and duly signed, and (ii) if such holder is not utilizing the cashless exercise provisions with respect to the warrants, payment of the exercise price for the number of shares with respect to which the warrant is being exercised. Warrants may be exercised in whole or in part, but only for full shares of common stock. We provide certain rescission and buy-in rights to a holder if we fail to deliver the shares of common stock underlying the warrants by the first trading day after the date on which delivery of the stock certificate is required by the warrant. With respect to the rescission rights, the holder has the right to rescind the exercise if stock certificates are not timely delivered. The buy-in rights apply if after the first trading day on which delivery of the stock certificate is required by the warrant, the holder purchases (in an open market transaction or otherwise) shares of our common stock to deliver in satisfaction of a sale by the holder of the warrant shares that the holder anticipated receiving from us upon exercise of the warrant. In this event, we will:

pay in cash to the holder the amount equal to the excess (if any) of the buy-in price over the product of (A) the number of warrant shares that we were required to deliver to the holder, times (B) the price at which the sell order giving rise to holder's purchase obligation was executed; and

S-33

at the election of the holder, either (A) reinstate the portion of the warrant as to such number of shares of common stock, or (B) deliver to the holder a certificate or certificates representing such number of shares of common stock.

In addition, the warrant holders are entitled to a “cashless exercise” option if, at any time of exercise, there is no effective registration statement registering, or no current prospectus available for, the issuance or resale of the shares of common stock underlying the warrants. This option entitles the warrant holders to elect to receive fewer shares of common stock without paying the cash exercise price. The number of shares to be issued would be determined by a formula based on the total number of shares with respect to which the warrant is being exercised, the market price per share of our common stock at the time of exercise and the applicable exercise price of the warrants issued in this offering.

The shares of common stock issuable on exercise of the warrants will be, when issued and paid for in accordance with the warrants, duly and validly authorized, issued and fully paid and non-assessable. We will authorize and reserve at least that number of shares of common stock equal to the number of shares of common stock issuable upon exercise of all outstanding warrants.

Fundamental Transactions

If, at any time while the warrants are outstanding, we, directly or indirectly, (1) consolidate or merge with or into another person, (2) sell, lease, license, assign, transfer, convey or otherwise dispose of all or substantially all of our assets or (3) are subject to or complete a tender or exchange offer pursuant to which holders of our common stock are permitted to tender or exchange their shares for other securities, cash or property and which has been accepted by 50% or more of the outstanding common stock, (4) effect any reclassification, reorganization or recapitalization of our common stock or any compulsory share exchange pursuant to which our common stock is effectively converted into or exchanged for other securities, cash or property, or (5) in one or more transactions consummate a stock purchase agreement or other business combination where the other party acquires more than

50% of our outstanding shares of common stock (each, a “Fundamental Transaction”), then the holder shall have the right thereafter to receive, upon exercise of the warrant, the same amount and kind of securities, cash or property as it would have been entitled to receive upon the occurrence of such Fundamental Transaction if it had been, immediately prior to such Fundamental Transaction, the holder of the number of warrant shares then issuable upon exercise of the warrant, and any additional consideration payable as part of the Fundamental Transaction. Any successor to us or surviving entity shall assume the obligations under the warrant. In addition, in the event we complete a Fundamental Transaction other than a stock transaction with a successor entity that is traded on a national securities exchange, the holders of the warrants will have the right to require us or our successor, to repurchase the remaining unexercised portion of the warrants at their then-current Black-Scholes Value (as defined) exercisable solely within thirty (30) days of the closing of a Fundamental Transaction.

Subsequent Rights Offerings

If, at any time while the warrants are outstanding, we issue rights, options or warrants to all holders of our common stock entitling them to purchase our common stock, then the holders of the warrants will be entitled to acquire those rights, options and warrants on the basis of the number of shares of common stock acquirable upon complete exercise of the warrants.

Pro Rata Distributions

If, at any time while the warrants are outstanding, we make a dividend or distribution of assets or rights to acquire assets to all holders of our common stock, the holders of the warrants will be entitled to participate in the dividend or distribution of assets or rights to acquire assets on the basis of the number of shares of common stock acquirable upon complete exercise of the warrants.

S-34

Certain Adjustments

The exercise price and the number of shares of common stock purchasable upon the exercise of the warrants are subject to adjustment upon the occurrence of specific events, including stock dividends, stock splits, combinations and reclassifications of our common stock.

Delivery of Shares

Upon the holder's exercise of a warrant, we will promptly, but in no event later than the first trading day after the holder delivers to us a notice of exercise, or the Warrant Share Delivery Date, issue and deliver, or cause to be issued and delivered, the shares of common stock issuable upon exercise of the warrant. We will, if either there is an effective registration statement permitting the issuance of the warrant shares to or resale of the warrant shares by holder or the warrant is being exercised via cashless exercise, issue and deliver the shares electronically through The Depository Trust Corporation through its Deposit Withdrawal Agent Commission System (DWAC) or another established clearing corporation performing similar functions.

Notice of Corporate Action

We will provide notice to holders of the warrants to provide them with the opportunity to exercise their warrants and hold common stock in order to participate in or vote on the following corporate events:

• if we shall take a record of the holders of our common stock for the purpose of entitling them to receive a dividend or other distribution, or any right to subscribe for or purchase any shares of stock of any class or any other right;

• any reclassification of our common stock, any consolidation or merger to which we are a party, any sale or transfer of all or substantially all of our assets, or any compulsory share exchange whereby our common is converted into other securities, cash or property; or

• a voluntary or involuntary dissolution, liquidation or winding up.

Limitations on Exercise

The number of warrant shares that may be acquired by any holder upon any exercise of the warrant shall be limited to the extent necessary to insure that, following such exercise (or other issuance), the total number of shares of common stock then beneficially owned by such holder and its affiliates and any other persons whose beneficial ownership of common stock would be aggregated with the holder's for purposes of Section 13(d) of the Exchange Act, does not exceed 4.99% of the total number of issued and outstanding shares of common stock (including for such purpose the shares of common stock issuable upon such exercise), or beneficial ownership limitation. The holder may elect to change this beneficial ownership limitation from 4.99% to 9.99% of the total number of issued and outstanding shares of common stock (including for such purpose the shares of common stock issuable upon such exercise) upon 61 days' prior written notice.

Additional Provisions

The above summary of certain terms and provisions of the warrants is qualified in its entirety by reference to the detailed provisions of the warrants, the form of which will be filed as an exhibit to a Current Report on Form 8-K that is incorporated herein by reference. We are not required to issue fractional shares upon the exercise of the warrants. No holders of the warrants will possess any rights as a stockholder under those warrants until the holder exercises those warrants, except as set forth in the warrants. The warrants may be transferred independent of the common stock they were issued with, on a form of assignment, subject to all applicable laws.

S-35

CERTAIN U.S. FEDERAL INCOME TAX CONSIDERATIONS

This section summarizes certain U.S. federal income tax considerations relating to the purchase, ownership and disposition of common stock and warrants. This summary does not provide a complete analysis of all potential tax considerations. The information provided below is based upon provisions of the Internal Revenue Code of

1986, as amended, or the Code, Treasury regulations promulgated thereunder and administrative rulings and judicial decisions, all as currently in effect. These authorities may change at any time, possibly on a retroactive basis, or the U.S. Internal Revenue Service, or the IRS, might interpret the existing authorities differently. In either case, the tax considerations of purchasing, owning or disposing of common stock or warrants could differ from those described below.

This discussion does not address all of the U.S. federal income tax considerations that might be relevant to a beneficial owner in light of such beneficial owner's particular circumstances or to beneficial owners subject to special treatment under the U.S. federal income tax laws, including:

- a broker, dealer or trader in securities, currencies, commodities, or notional principal contracts;
- a bank, financial institution or insurance company;
- a regulated investment company, a real estate investment trust or grantor trust;
- a tax-exempt entity or organization, including an individual retirement account or Roth IRA as defined in Section 408 or 408A of the Code, respectively;
- a person holding the common stock or warrants as part of a hedging, integrated, or conversion transaction or a straddle, or a person deemed to sell common stock or warrants under the constructive sale provisions of the Code;
- a trader in securities that has elected the mark-to-market method of tax accounting for securities;
- an entity that is treated as a partnership or other pass-through entity for U.S. federal income tax purposes;
- a person who is a partner or investor in a partnership or other pass-through entity that holds the common stock or warrants;
- a U.S. person whose "functional currency" is not the U.S. dollar;
- a controlled foreign corporation or passive foreign investment company;
- a qualified foreign pension fund or an entity that is wholly owned by one or more qualified foreign pension funds; or
- a U.S. expatriate.

For purposes of this discussion, a “U.S. holder” is a beneficial owner of a warrant or a share of common stock that is, for U.S. federal income tax purposes:

• an individual who is a citizen or resident of the United States;

• a corporation (or any other entity treated as a corporation for U.S. federal income tax purposes) created or organized in or under the laws of the United States, any state thereof or the District of Columbia;

• an estate the income of which is subject to U.S. federal income taxation regardless of its source; or

• a trust if (1) it is subject to the primary supervision of a court within the United States and one or more U.S. persons have the authority to control all substantial decisions of the trust or (2) it has a valid election in effect under applicable U.S. Treasury regulations to be treated as a U.S. person.

For purposes of this discussion, a “non-U.S. holder” is a beneficial owner of a share of common stock or a warrant that is (i) a foreign corporation, (ii) a nonresident alien individual, or (iii) a foreign estate or trust that in each case is not subject to U.S. federal income tax on a net-income basis on income or gain from a warrant or share of common stock.

S-36

If a partnership holds shares of common stock or warrants, the tax treatment of a partner will generally depend upon the status of the partner and the activities of the partnership. A partnership holding shares of common stock or warrants or a partner therein should consult its own tax advisors as to the tax consequences of holding and disposing of the warrants or shares of common stock.

You are urged to consult your tax advisor with respect to the application of the U.S. federal income tax laws to your particular situation, as well as any tax consequences of the purchase, ownership and disposition of our common stock or warrants arising under the U.S. federal estate or gift tax rules or under the laws of any U.S. state or local or any non-U.S. or other taxing jurisdiction or under any applicable tax treaty.

Certain U.S. Federal Income Tax Considerations for U.S. Holders of Common Stock and Warrants

Investment Unit

The common stock and warrants should be treated for U.S. federal income tax purposes as an investment unit consisting of one share of our common stock and one warrant to acquire one half share of our common stock. For U.S. federal income tax purposes, the purchase price paid for each investment unit will be allocated between the shares of common stock and the warrants based on their respective relative fair market values. This allocation

will be based upon our determination of the relative values of the warrants and of our common stock, which we will complete following the closing of the offering. While uncertain, the IRS, by analogy to the rules relating to the allocation of the purchase price to components of a unit consisting of debt and equity, may take the position that this allocation is binding on you unless you explicitly disclose in a statement attached to your timely filed U.S. federal income tax return for the tax year that includes your acquisition date of the unit that your allocation of the purchase price is different than our allocation. This allocation is not binding, however, on the IRS or the courts. Prospective investors are urged to consult their tax advisors regarding the U.S. federal income tax consequences of an investment in a unit, and the allocation of the purchase price paid for a unit.

Distributions on our Common Stock

We do not expect to declare or pay any distributions on our common stock in the foreseeable future. If we do make any distributions on shares of our common stock, however, such distributions will be includible in the gross income of a U.S. holder as ordinary dividend income to the extent paid out of current or accumulated earnings and profits, as determined for U.S. federal income tax purposes. Any portion of a distribution in excess of current or accumulated earnings and profits would be treated as a return of the holder's tax basis in its common stock and then as gain from the sale or exchange of the common stock. Under current law, if certain requirements are met, a preferential U.S. federal income tax rate will apply to any dividends paid to a holder of common stock who is a U.S. individual.

Distributions to U.S. holders that are corporate shareholders, constituting dividends for U.S. federal income tax purposes, may qualify for the dividends received deduction, or DRD, which is generally available to corporate shareholders. No assurance can be given that we will have sufficient earnings and profits (as determined for U.S. federal income tax purposes) to cause any distributions to be eligible for a DRD. In addition, a DRD is available only if certain holding periods and other taxable income requirements are satisfied.

Sale of Common Stock or Warrants

A U.S. holder of common stock or warrants will generally recognize gain or loss on the taxable sale, exchange, or other taxable disposition of such stock or warrants in an amount equal to the difference between such U.S. holder's amount realized on the sale and its adjusted tax basis in the common stock or warrants sold. A U.S. holder's amount realized should equal the amount of cash and the fair market value of any property received in consideration of its stock or warrants. The gain or loss should be capital gain or loss and should be long-term capital gain or loss if the common stock or warrants are held for more than one year at the time of disposition. The deductibility of capital losses for U.S. federal income tax purposes is subject to limitations under the Code. Under current law, long-term capital gain recognized by an individual U.S. holder is generally eligible for a preferential U.S. federal income tax rate.

S-37

Exercise or Lapse of Warrants

Except as discussed below with respect to a cashless exercise of a warrant or with respect to cash in lieu of a fractional share, upon the exercise of a warrant for common stock, a U.S. holder generally will not recognize gain or loss and will have a tax basis in the common stock received upon exercise equal to the U.S. holder's tax basis in the warrant, plus the exercise price of the warrant less any portion of the tax basis attributable to receipt of

cash in lieu of a fractional share. The holding period for the common stock purchased pursuant to the exercise of a warrant will begin on the date following the date of exercise and will not include the period during which the U.S. holder held the warrant. If a warrant is allowed to lapse unexercised, a U.S. holder will recognize a capital loss in an amount equal to its tax basis in the warrant. Such loss will be long-term capital loss if the warrant has been held for more than one year as of the date the warrant lapsed. The deductibility of capital losses is subject to certain limitations. Your receipt of cash in lieu of a fractional share of common stock will generally be treated as if you received the fractional share and then received such cash in redemption of such fractional share. Such redemption will generally result in the recognition of capital gain or loss equal to the difference between the amount of cash received and your adjusted U.S. federal income tax basis in the warrant that is allocable to the fractional share you are deemed to have received.

The tax treatment of a cashless exercise of a warrant (i.e., where a portion of the holder's warrants are surrendered (the "Surrendered Warrants") as the exercise price for other warrants to be exercised (the "Exercised Warrants") as described above under "Description of Securities – Warrants – Exercise") is uncertain. Although the matter is not free from doubt, a cashless exercise should be treated as a tax-free transaction in which a holder's tax basis in the common stock received should equal the sum of the U.S. holder's tax basis in the Surrendered Warrants and the Exercised Warrants. It is also possible, however, that a cashless exercise could be treated as a taxable transaction, and a U.S. Holder could recognize taxable gain or loss in an amount equal to the difference between the exercise price deemed paid and such U.S. holder's tax basis in the Surrendered Warrants. In this case, a U.S. Holder's tax basis in the common stock received should equal the sum of the exercise price deemed paid and the U.S. Holder's tax basis in the warrants exercised.

The holding period for common stock acquired in a cashless exercise will depend on the U.S. federal income tax treatment of a cashless exercise. The holding period for a share of common stock acquired in a cashless exercise would include the holding period of the Surrendered Warrants and Exercised Warrants if the cashless exercise is treated as a tax-free transaction. The holding period for a share of common stock acquired in a cashless exercise would begin on the day following the date of exercise if the cashless exercise is treated as a taxable exchange or treated similarly to a cash exercise (even if otherwise a tax-free transaction). Due to the absence of authority on the U.S. federal income tax treatment of a cashless exercise, there can be no assurance which, if any, of the alternative tax consequences and holding periods described above would be adopted by the IRS or a court of law. Accordingly, holders are urged to consult their tax advisors as to the tax consequences of a cashless exercise.

Certain Adjustments to Warrants

Under Section 305 of the Code, an adjustment to the number of shares of common stock that will be issued on the exercise of the warrants, or an adjustment to the exercise price of the warrants, may be treated as a constructive distribution to a U.S. holder of the warrants if, and to the extent that, such adjustment has the effect of increasing such

U.S. holder's proportionate interest in our "earnings and profits" or assets, depending on the circumstances of such adjustment (for example, if such adjustment is to compensate for a distribution of cash or other property to our shareholders). Adjustments to the exercise price of a warrant made pursuant to a bona fide reasonable adjustment formula that has the effect of preventing dilution of the interest of the holders of the warrants should generally not result in a constructive distribution.

Information Reporting and Backup Withholding

Information reporting requirements generally will apply to payments of dividends on shares of common stock and to the proceeds of a sale of common stock unless a U.S. holder is an exempt recipient, such as a corporation. Backup withholding will apply to those payments if a U.S. holder fails to provide its correct taxpayer identification number and certification of exempt status, or fails to report in full dividend income. Any amounts withheld under the backup withholding rules will be allowed as a refund or a credit against U.S. federal income tax liability, provided the required information is timely furnished to the IRS.

S-38

Certain U.S. Federal Income Tax Considerations for Non-U.S. Holders of Common Stock and Warrants

Investment Unit

The common stock and warrants should be treated for U.S. federal income tax purposes as an investment unit consisting of one share of our common stock and one warrant to acquire one half share of our common stock. For U.S. federal income tax purposes, the purchase price paid for each unit will be allocated between the shares of common stock and the warrants based on their respective relative fair market values.

Distributions on our Common Stock

We do not expect to declare or pay any distributions on our common stock in the foreseeable future. If we do make any distributions on shares of our common stock (including a distribution we are deemed to make as described below under “Certain Adjustments to Warrants”), however, such distributions will constitute dividends for U.S. federal income tax purposes to the extent paid from our current or accumulated earnings and profits, as determined under U.S. federal income tax principles. Distributions in excess of our current and accumulated earnings and profits will constitute a return of capital that is applied against and reduces, but not below zero, a non-U.S. holder’s adjusted tax basis in shares of our common stock. Any remaining excess will be treated as gain realized on the sale or other disposition of our common stock. See “—Sale of Common Stock.” Any dividend

paid to a non-U.S. holder on our common stock will generally be subject to U.S. withholding tax at a 30% rate. The withholding tax might not apply, however, or might apply at a reduced rate, under the terms of an applicable income tax treaty between the United States and the non-U.S. holder’s country of residence. Non-U.S. holders should consult their own tax advisors regarding their entitlement to benefits under a relevant income tax treaty. Generally, in order for us or our paying agent to withhold tax at a lower treaty rate, a non-U.S. holder must

certify its entitlement to treaty benefits. A non-U.S. holder generally can meet this certification requirement by providing to us or our paying agent an applicable IRS Form W-8 (which generally remains valid for three years, after which time a new properly completed and executed form must be provided to us or our paying agent). If the holder holds the stock through a financial institution or other agent acting on the holder’s behalf, the holder will be required to provide appropriate documentation to the agent. The holder’s agent will then be required to

provide certification to us or our paying agent, either directly or through other intermediaries. If a non-U.S. holder is eligible for a reduced rate of U.S. federal withholding tax under an income tax treaty, such non-U.S. holder may obtain a refund or credit of any excess amounts withheld by filing an appropriate claim for a refund with the IRS in a timely manner.

Dividends (including any dividends deemed to be received by you as described below under “Certain Adjustments to Warrants”) received by a non-U.S. holder that are effectively connected with a U.S. trade or business conducted by the non-U.S. holder, or, if an income tax treaty between the United States and the

non-U.S. holder’s country of residence applies, are attributable to a permanent establishment or a fixed base maintained by the non-U.S. holder in the United States, are not subject to such withholding tax. To obtain this

exemption, a non-U.S. holder must provide us or our paying agent with an IRS Form W-8ECI properly certifying such exemption. Such effectively connected dividends, although not subject to withholding tax, are taxed at the same graduated rates applicable to U.S. persons, as defined under the Code, net of certain deductions and credits, subject to any applicable income tax treaty providing otherwise. In addition to the graduated tax described above, dividends received by corporate non-U.S. holders that are effectively connected with a U.S. trade or business of the corporate non-U.S. holder may also be subject to a branch profits tax at a rate of 30% or such lower rate as may be specified by an applicable income tax treaty.

Sale of Common Stock or Warrants

Non-U.S. holders will generally not be subject to U.S. federal income tax on any gains realized on the sale, exchange or other disposition of common stock unless:

- the gain (1) is effectively connected with the conduct by the non-U.S. holder of a U.S. trade or business and (2) if an income tax treaty between the United States and the non-U.S. holder's country of residence applies, the gain is attributable to a permanent establishment or a fixed base maintained by the non-U.S. holder in the United States, in which case the special rules described below apply;
- the non-U.S. holder is an individual who is present in the United States for 183 days or more in the

S-39

taxable year of the sale, exchange or other disposition of our common stock, and certain other requirements are met, in which case the gain would be subject to a flat 30% tax, or such reduced rate as may be specified by an applicable income tax treaty, which may be offset by U. S. source capital losses, even though the individual is not considered a resident of the United States; or

if we are, or were within the shorter of the five-year period preceding the disposition and the non-U.S. holder's holding period, a "U.S. real property holding corporation," or USRPHC. Generally, a corporation is a USRPHC only if the fair market value of its U.S. real property interests equals or exceeds 50% of the sum of the fair market value of its worldwide real property interests plus its other assets used or held for use in a trade or business.

We do not believe that we are a USRPHC and we do not anticipate becoming one in the future. Even if we are or become a USRPHC, as long as our common stock is regularly traded on an established securities market, then only a non-U.S. holder that actually or constructively owns (at any time during the shorter of the five-year period preceding the date of disposition or the holder's holding period) more than 5% of our outstanding common stock will be subject to U.S. federal income tax on the disposition of our common stock.

Any gain described in the first bullet point above will be subject to U.S. federal income tax at the regular graduated rates. If the non-U.S. holder is a corporation, under certain circumstances, that portion of its earnings and profits that is effectively connected with its U.S. trade or business, subject to certain adjustments, generally would be subject to a "branch profits tax." The branch profits tax rate is generally 30%, although an applicable income tax treaty between the United States and the non-U.S. holder's country of residence might provide for a lower rate.

Exercise or Lapse of Warrants

A non-U.S. holder will generally not be subject to U.S. federal income tax on any gains realized on the exercise of a warrant except as described above under "Sale of Common Stock or Warrants". Except as discussed below with respect to a cashless exercise of a warrant or with respect to cash in lieu of a fractional share, upon the exercise of a warrant, a non-U.S. holder generally will not recognize gain or loss upon exercise of a warrant. Your receipt of cash in lieu of a fractional share of common stock will generally be treated as if you received the fractional share and then received such cash in redemption of such fractional share. Such redemption will generally result in the recognition of capital gain or loss equal to the difference between the amount of cash received and your adjusted U.S. federal income tax basis in the warrant that is allocable to the fractional share you are deemed to have received.

The tax treatment of a cashless exercise of a warrant (i.e., where a portion of the holder's warrants are surrendered (the "Surrendered Warrants") as the exercise price for other warrants to be exercised (the "Exercised Warrants") as described above under "Description of Securities – Warrants – Exercise") is uncertain. Although the matter is not free from doubt, a cashless exercise should be treated as a tax-free transaction in which a holder's tax basis in the common stock received should equal the sum of the non-U.S. holder's tax basis in the Surrendered Warrants and the Exercised Warrants. It is also possible, however, that a cashless exercise could be treated as a taxable transaction, and a non-U.S. holder could recognize taxable gain or loss in an amount equal to the difference between the exercise price deemed paid and such non-U.S. holder's tax basis in the Surrendered Warrants. In this case, a non-U.S. holder's tax basis in the common stock received should equal the sum of the exercise price deemed paid and the non-U.S. holder's tax basis in the warrants exercised.

The holding period for common stock acquired in a cashless exercise will depend on the U.S. federal income tax treatment of a cashless exercise. The holding period for a share of common stock acquired in a cashless exercise would include the holding period of the Surrendered Warrants and Exercised Warrants if the cashless exercise is treated as a tax-free transaction. The holding period for a share of common stock acquired in a cashless exercise would begin on the day following the date of exercise if the cashless exercise is treated as a taxable exchange or treated similarly to a cash exercise (even if otherwise a tax-free transaction). Due to the absence of authority on the U.S. federal income tax treatment of a cashless exercise, there can be no assurance which, if any, of the alternative tax consequences and holding periods described above would be adopted by the IRS or a court of law. Accordingly, holders are urged to consult their tax advisors as to the tax consequences of a cashless exercise.

S-40

Certain Adjustments to Warrants

Under Section 305 of the Code, an adjustment to the number of ordinary shares that will be issued on the exercise of the warrants, or an adjustment to the exercise price of the warrants, may be treated as a constructive

distribution to a non-U.S. holder of the warrants if, and to the extent that, such adjustment has the effect of increasing such non-U.S. holder's proportionate interest in our "earnings and profits" or assets, depending on the circumstances of such adjustment (for example, if such adjustment is to compensate for a distribution of cash or other property to our shareholders). Adjustments to the exercise price of a warrant made pursuant to a bona fide reasonable adjustment formula that has the effect of preventing dilution of the interest of the holders of the warrants should generally not result in a constructive distribution.

Information Reporting and Backup Withholding

We must report annually to the IRS and to each non-U.S. holder the gross amount of the distributions on our common stock paid to such holder and the tax withheld, if any, with respect to such distributions. Non-U.S. holders may have to comply with specific certification procedures to establish that the holder is not a U.S. person (as defined in the Code) in order to avoid backup withholding at the applicable rate with respect to dividends on our common stock. Dividends paid to non-U.S. holders subject to withholding of U.S. federal income tax, as described above in "Distributions on Our Common Stock," generally will be exempt from U.S. backup withholding.

Information reporting and backup withholding will generally apply to the proceeds of a disposition of our common stock or warrants by a non-U.S. holder effected by or through the U.S. office of any broker, U.S. or foreign, unless the holder certifies its status as a non-U.S. holder and satisfies certain other requirements, or otherwise establishes an exemption. Generally, information reporting and backup withholding will not apply to a payment of disposition proceeds to a non-U.S. holder where the transaction is effected outside the United States through a non-U.S. office of a broker. However, for information reporting purposes, dispositions effected through a non-U.S. office of a broker with substantial U.S. ownership or operations generally will be treated in a manner similar to dispositions effected through a U.S. office of a broker. Non-U.S. holders should consult their own tax advisors regarding the application of the information reporting and backup withholding rules to them.

Copies of information returns may be made available to the tax authorities of the country in which the non-U.S. holder resides or is incorporated under the provisions of a specific treaty or agreement. Backup withholding is not an additional tax. Any amounts withheld under the backup withholding rules from a payment to a non-U.S. holder can be refunded or credited against the non-U.S. holder's U.S. federal income tax liability, if any, provided that an appropriate claim is filed with the IRS in a timely manner.

Withholding on Foreign Accounts

Legislation known as the Foreign Account Tax Compliance Act and guidance issued thereunder (“FATCA”) imposes withholding taxes on certain types of payments made to “foreign financial institutions” and certain other foreign entities (including financial intermediaries). FATCA generally imposes withholding at a rate of 30% on payments to certain foreign entities of dividends (including deemed dividends on warrants) on our common stock and the gross proceeds of dispositions of our common stock or warrants, unless various U.S. information

reporting and due diligence requirements (generally relating to ownership by U.S. persons of interests in or accounts with those entities) have been satisfied or the entity otherwise qualifies for an exemption. An intergovernmental agreement between the United States and an applicable foreign country may modify these requirements. These withholding rules generally apply to payments of dividends on common stock, and to payments of gross proceeds from a sale or other disposition our common stock or warrants made on or after January 1, 2019. You should consult your tax advisor regarding the application of FATCA.

The preceding discussion of U.S. federal tax considerations is for general information only. It is not tax advice. Each prospective investor should consult its own tax advisor regarding the particular U.S. federal, state and local and non-U.S. tax consequences of purchasing, holding and disposing of our common stock or warrants, including the consequences of any proposed change in applicable laws.

S-41

UNDERWRITING

Pursuant to the Underwriting Agreement, we have agreed to issue and sell and the Underwriters, for whom Rodman & Renshaw, a unit of H.C. Wainwright & Co., LLC is acting as Representative, have severally agreed to purchase, as principals, subject to compliance with all necessary legal requirements and the terms and conditions contained in the Underwriting Agreement, a total of combinations of consisting of an aggregate of shares and Warrants at the public offering price of \$ per combination, less the underwriting discount of %, payable in cash to us against delivery of such combinations on the closing date. The public offering price shown on the cover of this prospectus supplement was determined by negotiation between us and the Representative on behalf of the other Underwriters. Subject to the terms and conditions of the Underwriting Agreement, we have agreed to sell to the Underwriters, and each Underwriter has severally agreed to purchase, at the public offering price less the underwriting discount set forth on the cover page of this prospectus supplement, the number of combinations listed next to its name in the following table:

	Number of Combinations
Rodman & Renshaw, a unit of H.C. Wainwright & Co., LLC	

The Underwriters propose to offer the combinations initially at the public offering price. After a reasonable effort has been made to sell all of the combinations at the public offering price, the Underwriters may subsequently reduce the selling price to investors from time to time in order to sell any of the combinations remaining unsold. Any such reduction will not affect the proceeds received by us.

The obligations of the Underwriters under the Underwriting Agreement are several, and not joint, and may be terminated at their discretion at any time prior to any closing date upon the occurrence of certain events specified in the Underwriting Agreement including standard “material adverse effect out” and “market out” rights of termination. In the event the Underwriting Agreement is terminated pursuant to its terms, we shall be obligated to pay the Underwriters their actual and accountable out of pocket expenses related to the transactions contemplated therein then due and payable, including the fees and disbursements of Underwriters’ legal counsel up to \$75,000, provided, however, that such expense cap in no way limits or impairs the indemnification and contribution provisions of the Underwriting Agreement.

The Underwriters are obligated to take up and pay for all the combinations offered by this prospectus supplement if any are purchased under the Underwriting Agreement, subject to certain exceptions. We have agreed in the Underwriting Agreement to reimburse the Underwriters for their legal fees in an amount not to exceed \$75,000 unless the Underwriters engage Canadian counsel in which case the amount will be increased to \$125,000 and certain other

accountable expenses in connection with the Offering as specified in the Underwriting Agreement.

We have granted to the Representative an option, exercisable not later than 30 days after the date of this prospectus, to have the Underwriters purchase up to a number of additional shares of common stock equal to 15% of the number of shares of common stock sold in the primary offering and/or up to a number of additional warrants to purchase shares of common stock equal to 15% of the number of warrants sold in the primary offering. Any shares so purchased shall be sold at a price per share equal to the allocated public offering price per shares of \$, less the underwriting discount. Any warrants so purchased shall be sold at a price per warrant of \$0.01, less the underwriting discount. The Underwriters may exercise the option solely to cover over- allotments, if any, made in connection with this offering. If any additional shares of common stock and/or warrants are purchased pursuant to the over-allotment option, the Underwriters will offer these shares of common stock and/or warrants on the same terms as those on which the other securities are being offered hereby. The over-allotment option may be used to purchase shares of common stock, or warrants, or any combination thereof, as determined by the Representative.

S-42

We have agreed, pursuant to the Underwriting Agreement, to indemnify the Underwriters, and each dealer selected by each Underwriter that participated in the Offering (each, a “Selected Dealer”) and each of their respective directors, officers and employees and each person, if any who controls such Underwriter or any Selected Dealer against certain liabilities, including liabilities under Canadian and U.S. securities legislation in certain circumstances or to contribute to payments the Underwriters may have to make because of such liabilities.

We have agreed in the Underwriting Agreement that from the date of the Underwriting Agreement until 60 days thereafter, neither the Company nor any subsidiary of the Company shall issue, enter into any agreement to issue or announce the issuance or proposed issuance of any shares of common stock or common stock equivalents.

As a condition precedent to the Underwriters’ obligation to close the Offering, subject to customary exemptions permitting dispositions to trusts for the direct or indirect benefit of the director or officer and/or the immediate family of such person, tenders to a take-over bid or acquisition transaction and pursuant to any existing 10b5-1 plans, all directors and officers of the Company and certain holders of common stock and common stock equivalents holding, on a fully diluted basis, more than 5% of the Company’s issued and outstanding common stock shall be required to execute and deliver written undertakings in favor of the Underwriters agreeing not to sell, transfer, pledge (other than as disclosed to the Underwriters in writing), assign, or otherwise dispose of any of our securities owned, directly or indirectly by such directors or officers, until 60 days following the closing date, without the prior written consent of the Representative on behalf of the Underwriters.

Subscriptions for the combinations will be received subject to rejection or allotment in whole or in part and the right is reserved to close the subscription books at any time without notice. The closing of the Offering is expected to occur on or about August 10, 2017. It is anticipated that the Shares forming part of the combinations will be issued in “book-entry only” form and represented by a global certificate or certificates, or be represented by uncertificated securities, registered in the name of DTC, as directed by the Underwriters, and will be deposited with DTC. Except in limited circumstances, no beneficial holder of Shares will receive definitive certificates representing their interest in the Shares. Beneficial holders of Shares will receive only a customer confirmation from the Underwriters or other registered dealer who is a DTC participant and from or through whom a beneficial interest in the Shares is acquired. Certain other holders will receive definitive certificates representing their interests in the Shares. All holders are expected to receive Warrants in physical certificated form.

In connection with the offering, the Underwriters may engage in stabilizing transactions, over-allotment transactions, syndicate covering transactions and penalty bids in accordance with Regulation M under the Exchange Act.

Stabilizing transactions permit bids to purchase the underlying security so long as the stabilizing bids do not exceed a specified maximum.

-

Over-allotment involves sales by the Underwriters of shares in excess of the number of shares the Underwriters are obligated to purchase, which creates a syndicate short position. The Underwriters may close out any short position by purchasing shares in the open market.

◆ Syndicate covering transactions involve purchases of the common stock in the open market after the distribution has been completed in order to cover syndicate short positions. If the Underwriters sell more combinations than they purchase from us, the position can only be closed out by buying shares and/or warrants in the open market. A short position is more likely to be created if the Underwriters are concerned that there could be downward pressure on the price of the shares in the open market after pricing that could adversely affect investors who purchase in the offering.

◆ Penalty bids permit the Representative to reclaim a selling concession from a syndicate member when the common stock originally sold by the syndicate member is purchased in a stabilizing or syndicate covering transaction to cover syndicate short positions.

S-43

These stabilizing transactions, syndicate covering transactions and penalty bids may have the effect of raising or maintaining the market price of our common stock or preventing or retarding a decline in the market price of the common stock. As a result the price of our common stock may be higher than the price that might otherwise exist in the open market. These transactions may be effected on the NYSE or otherwise and, if commenced, may be discontinued at any time.

Neither we nor any of the Underwriters make any representation or prediction as to the direction or magnitude of any effect that the transactions described above may have on the price of our common stock. In addition, neither we nor any of the Underwriters make any representation that the Representative will engage in these transactions or that these transactions, once commenced, will not be discontinued without notice.

A prospectus in electronic format may be made available on the websites maintained by one or more of the Underwriters, or selling group members, if any, participating in this offering and one or more of the Underwriters participating in this offering may distribute prospectuses electronically. Other than the prospectus in electronic format, the information on the websites of any such Underwriter or selling group member is not part of this prospectus. The Representative may agree to allocate a number of shares to underwriters and selling group members for sale to their online brokerage account holders. Internet distributions will be allocated by the Underwriters and selling group members that will make internet distributions on the same basis as other allocations.

A copy of the Underwriting Agreement and the form of Warrant will be included as exhibits to our current report on Form 8-K that will be filed with the SEC in connection with the consummation of this Offering.

S-44

LEGAL MATTERS

The validity of the securities offered hereby has been passed upon for us by Goodwin Procter LLP, Boston, Massachusetts. Ellenoff Grossman & Schole LLP, New York, New York is representing the underwriters in connection with this offering.

EXPERTS

The consolidated financial statements and the related financial statement schedule, incorporated in this prospectus supplement by reference from BioAmber Inc.'s Annual Report on Form 10-K for the year ended December 31, 2016 have been audited by Deloitte LLP, an independent registered public accounting firm, as stated in their reports, which are incorporated herein by reference. Such financial statements and financial statement schedule have been so incorporated in reliance upon the reports of such firm given upon their authority as experts in accounting and auditing.

S-45

PROSPECTUS

\$100,000,000

Common Stock, Preferred Stock, Debt Securities, Warrants or Units

From time to time, we may offer up to \$100,000,000 of any combination of the securities described in this prospectus, either individually or in units. Each time we offer securities, we will provide the specific terms of the securities offered in one or more supplements to this prospectus. We may also authorize one or more free writing prospectuses to be provided to you in connection with these offerings. The prospectus supplement and any related free writing prospectus may also add, update or change information contained in this prospectus. You should carefully read this prospectus, the applicable prospectus supplement and any related free writing prospectus, as well as any documents incorporated by reference, before buying any of the securities being offered.

The securities offered by this prospectus may be sold directly by us to investors, through agents designated from time to time or to or through underwriters or dealers. We will set forth the names of any underwriters or agents and any applicable fees, commissions, discounts and over-allotments in an accompanying prospectus supplement. For additional information on the methods of sale, you should refer to the section entitled “Plan of Distribution” in this prospectus and in the applicable prospectus supplement. The price to the public of such securities and the net proceeds we expect to receive from such sale will also be set forth in a prospectus supplement.

Our common stock is traded on the New York Stock Exchange under the symbol “BIOA.” On December 30, 2016, the last reported sale price of our common stock on the New York Stock Exchange was \$5.50 per share. The applicable prospectus supplement will contain information, where applicable, as to any other listing, if any, on the New York Stock Exchange or any securities market or other exchange of the securities covered by the applicable prospectus supplement.

Investing in our securities involves a high degree of risk. You should review carefully the risks and uncertainties referenced under the heading “Risk Factors” on page 10 of this prospectus as well as those contained in the applicable prospectus supplement and any related free writing prospectus, and in the other documents that are incorporated by reference into this prospectus.

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

The date of this prospectus is January 12, 2017.

TABLE OF CONTENTS

	Page
ABOUT THIS PROSPECTUS	1
WHERE YOU CAN FIND ADDITIONAL INFORMATION	1
INCORPORATION OF CERTAIN INFORMATION BY REFERENCE	2
FORWARD-LOOKING STATEMENTS	3
SUMMARY	4
RISK FACTORS	7
RATIO OF EARNINGS TO FIXED CHARGES	8
USE OF PROCEEDS	9
DILUTION	10
PLAN OF DISTRIBUTION	11
DESCRIPTION OF CAPITAL STOCK	13
DESCRIPTION OF OUR DEBT SECURITIES	21
DESCRIPTION OF WARRANTS	27
DESCRIPTION OF UNITS	29
FORMS OF SECURITIES	30
LEGAL MATTERS	32
EXPERTS	32

ABOUT THIS PROSPECTUS

This prospectus is part of a registration statement on Form S-3 that we filed with the Securities and Exchange Commission, or the SEC, utilizing a “shelf” registration process. Under this shelf registration process, we may offer shares of our common stock and preferred stock, various series of warrants to purchase common stock or preferred stock and debt securities, either individually or in units, in one or more offerings, up to a total dollar amount of \$100,000,000. This prospectus provides you with a general description of the securities we may offer. Each time we offer a type or series of securities under this prospectus, we will provide a prospectus supplement that will contain more specific information about the specific terms of the offering. We may also authorize one or more free writing prospectuses to be provided to you that may contain material information relating to these offerings. Each such prospectus supplement and any related free writing prospectus that we may authorize to be provided to you may also add, update or change information contained in this prospectus or in documents incorporated by reference into this prospectus. We urge you to carefully read this prospectus, any applicable prospectus supplement and any related free writing prospectus, together with the information incorporated herein by reference as described under the headings “Where You Can Find Additional Information” and “Incorporation of Certain Information by Reference” before buying any of the securities being offered.

You should rely only on the information contained or incorporated by reference in this prospectus, any applicable prospectus supplement and any related free writing prospectus. We have not authorized anyone to provide you with different information in addition to or different from that contained in this prospectus, any applicable prospectus supplement and any related free writing prospectus. No dealer, salesperson or other person is authorized to give any information or to represent anything not contained in this prospectus, any applicable prospectus supplement or any related free writing prospectus that we may authorize to be provided to you. You must not rely on any unauthorized information or representation. This prospectus is an offer to sell only the securities offered hereby, but only under circumstances and in jurisdictions where it is lawful to do so. You should assume that the information in this prospectus, any applicable prospectus supplement or any related free writing prospectus is accurate only as of the date on the front of the document and that any information incorporated by reference is accurate only as of the date of the document incorporated by reference, regardless of the time of delivery of this prospectus, any applicable prospectus supplement or any related free writing prospectus, or any sale of a security. Our business, financial condition, results of operating and prospects may have changed materially since those dates.

This prospectus contains summaries of certain provisions contained in some of the documents described herein, but reference is made to the actual documents for complete information. All of the summaries are qualified in their entirety by the actual documents. Copies of some of the documents referred to herein have been filed, will be filed or will be incorporated by reference as exhibits to the registration statement of which this prospectus is a part, and you may obtain copies of those documents as described below under the heading “Where You Can Find Additional Information.”

WHERE YOU CAN FIND ADDITIONAL INFORMATION

We post on our public website (www.bio-amber.com) our Annual Report on Form 10-K, Quarterly Reports on Form 10-Q, Current Reports on Form 8-K, and amendments to those reports filed or furnished pursuant to Section 13(a) or 15(d) of the Securities Exchange Act of 1934, as amended, or the Exchange Act, as soon as reasonably practicable after we electronically file such material with, or furnish it to, the SEC. Our website and the information contained on that site, or connected to that site, are not incorporated into and are not a part of this prospectus.

You can find, copy and inspect information we file with the SEC at the SEC’s public reference room, which is located at 100 F Street, N.E. Washington, D.C. 20549. Please call the SEC at 1-800-SEC-0330 for more information about the

operation of the SEC's public reference room. You can also review our electronically filed reports and other information that we file with the SEC on the SEC's website at <http://www.sec.gov>.

This prospectus is part of a registration statement that we filed with the SEC. The registration statement contained more information than this prospectus regarding us and the securities, including exhibits and schedules. You can obtain a copy of the registration statement from the SEC at any address listed above or from the SEC's website. You should review the information and exhibits in the registration statement for further information on us and our consolidated subsidiary and the securities we are offering. Statements in this prospectus concerning any document we filed as an exhibit to the registration statement or that we otherwise filed with the SEC are not intended to be comprehensive and are qualified by reference to these filings. You should review the complete document to evaluate these statements.

1

INCORPORATION OF CERTAIN INFORMATION BY REFERENCE

The SEC allows us to “incorporate by reference” the information we file with it, which means that we can disclose important information to you by referring you to those documents instead of having to repeat the information in this prospectus. The information incorporated by reference is considered to be part of this prospectus, and later information that we file with the SEC will automatically update and supersede this information. We incorporate by reference the documents listed below that we have filed with the SEC:

- description of our common stock contained in our Registration Statement on Form 8-A, filed May 1, 2013;
- description of our warrants contained in our Registration Statement on Form 8-A/A filed May 9, 2013 and amended on May 10, 2013;
- our Annual Report on Form 10-K for the year ended December 31, 2015, filed on March 15, 2016;
- our Quarterly Reports on Form 10-Q for the quarterly period ended March 31, 2016, filed on May 9, 2016, for the quarterly period ended June 30, 2016, filed on August 9, 2016, and for the quarterly period ended September 30, 2016, filed on November 7, 2016;
- our Proxy Statement on Schedule 14A filed with the SEC on April 6, 2016; and
- our Current Reports on Form 8-K filed with the SEC on January 19, 2016, February 12, 2016, February 26, 2016, April 26, 2016 (as amended on August 9, 2016), May 23, 2016, September 14, 2016 and December 29, 2016.

We also incorporate by reference into this prospectus all documents (other than current reports furnished under Item 2.02 or Item 7.01 of Form 8-K and exhibits filed on such form that are related to such items) that are filed by us with the SEC pursuant to Sections 13(a), 13(c), 14 or 15(d) of the Exchange Act (i) after the date of the initial filing of the registration statement of which this prospectus is a part and prior to effectiveness of the registration statement, or (ii) after the date of this prospectus until we sell all of the shares covered by this prospectus or the sale of shares by us pursuant to this prospectus is terminated.

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

You may request a copy of these documents, orally or in writing, which will be provided to you at no cost by contacting: BioAmber Inc., 1250 Rene Levesque West, Suite 4310, Montreal, Quebec, Canada H3B 4W8, or calling (514) 844-8000.

FORWARD-LOOKING STATEMENTS

This prospectus contains statements that are not historical facts and are considered forward-looking within the meaning of Section 27A of the Securities Act of 1933, as amended, or the Securities Act, and Section 21E of the Exchange Act. These forward-looking statements contain projections of our future results of operations or of our financial position or state other forward-looking information. In some cases you can identify these statements by forward-looking words such as “anticipate,” “believe,” “could,” “continue,” “estimate,” “expect,” “intend,” “may,” “should,” “plan,” “projected” or the negative of such words or other similar words or phrases. We believe that it is important to communicate our future expectations to our investors. However, there may be events in the future that we are not able to accurately predict or control and that may cause our actual results to differ materially from the expectations we describe in our forward-looking statements. Investors are cautioned not to unduly rely on forward-looking statements because they involve risks and uncertainties, and actual results may differ materially from those discussed as a result of various factors, including, but not limited to:

- the expected funding sources of our future planned manufacturing facilities and the expected timing of the completion of construction and the start of commercial operations at each of these facilities;
- our joint venture with Mitsui & Co. Ltd., or Mitsui;
- our offtake agreements with Vinmar International Ltd., or Vinmar, related to bio-based 1,4-butanediol, which we refer to as 1,4 BDO or BDO, tetrahydrofuran, which we refer to as THF, and bio-based succinic acid, and with PTTMCC Biochem Company Limited, or PTTMCC Biochem, for bio-succinic acid;
- the expected market applications for our products and the sizes of these addressable markets;
- our ability to gain market acceptance for bio-succinic acid, its derivatives including 1,4 BDO and THF and other building block chemicals;
- our ability to ramp up commercial sales and execute on our commercial expansion plan, including the timing and volume of our future production and sales;
- the expected cost-competitiveness and relative performance attributes of our bio-succinic acid and the products derived from it;
- our ability to cost-effectively produce and commercialize bio-succinic acid, its derivatives and other building block chemicals;
- customer qualification, approval and acceptance of our products;
- our ability to maintain and advance strategic partnerships and collaborations and the expected benefits and accessible markets related to those partnerships and collaborations;
- the impact of our off-take agreements on our business with our customers, our distributors and our current and future equity partners;
- our ability to economically obtain feedstock and other inputs;
- the achievement of advances in our technology platform;
- our ability to obtain and maintain intellectual property protection for our products and processes and not infringe on others’ rights;
- government regulatory and industry certification approvals for our facilities and products;
- government policymaking and incentives relating to bio-chemicals;
- our ability to maintain an effective system of internal controls and prevent future material weaknesses or significant deficiencies from occurring; and
- our ability to maintain and secure adequate funding for our current business activities;

and other risks and uncertainties referenced under “Risk Factors” below and in any applicable prospectus supplement or free writing prospectus and any documents incorporated by reference herein or therein. You should not place undue reliance on our forward-looking statements. These forward-looking statements speak only as of the date on which the statements were made and are not guarantees of future performance. Except as may be required by applicable law, we

do not undertake or intend to update any forward-

3



looking statements after the date of this prospectus or the respective dates of documents incorporated herein or therein that include forward-looking statements.

4

SUMMARY

This summary highlights selected information from this prospectus or incorporated by reference in this prospectus, and does not contain all of the information that you need to consider in making your investment decision. You should carefully read the entire prospectus, the applicable prospectus supplement and any related free writing prospectus, including the risks of investing in our securities referred to under the heading “Risk Factors” in this prospectus and contained in the applicable prospectus supplement and any related free writing prospectus, and in the other documents that are incorporated by reference into this prospectus. You should also carefully read the information incorporated by reference into this prospectus, including our financial statements, and the exhibits to the registration statement of which this prospectus is a part.

Unless otherwise mentioned or unless the context requires otherwise, throughout this prospectus, any applicable prospectus supplement and any related free writing prospectus, the words “BioAmber,” “we,” “us,” “our,” the “company” or similar references refer to BioAmber Inc. and its subsidiaries; and the term “securities” refers collectively to our common stock, preferred stock, warrants to purchase common stock or preferred stock, debt securities, or any combination of the foregoing securities.

This prospectus and the information incorporated herein by reference includes trademarks, service marks and trade names owned by us or other companies. All trademarks, service marks and trade names included or incorporated by reference into this prospectus, any applicable prospectus supplement or any related free writing prospectus are the property of their respective owners.

Our Company

We are an industrial biotechnology company producing sustainable chemicals. Our proprietary technology platform combines industrial biotechnology and chemical catalysis to convert renewable feedstocks into sustainable chemicals that are cost-competitive replacements for petroleum-derived chemicals, which are used in a wide variety of everyday products including plastics, resins, paints, food additives and personal care products. We currently sell our first product, bio-succinic acid, to customers in a variety of chemical markets. We produce bio-succinic acid at our facility in Sarnia, Ontario, pursuant to a joint venture agreement with Mitsui.

Succinic acid can be used to manufacture a wide variety of products used every day, including plastics, food additives and personal care products, and can also be used as a building block for a number of derivative chemicals. Today, petroleum-derived succinic acid is not used in many potential applications because of its relatively high production costs and selling price. We believe that our low-cost production capability and our development of next-generation bio-succinic derived products including 1,4 BDO, which is used to produce polyesters, plastics, spandex and other products, will provide us with access to a more than \$10 billion market opportunity.

We are working to rapidly expand our accessible markets and product portfolio. We have entered into strategic relationships with several leading companies, such as our offtake agreements with PTTMCC Biochem for bio-succinic acid produced in our Sarnia facility and with Vinmar for our future manufacturing facilities producing bio-succinic acid, 1,4 BDO and THF. We have also entered into agreements with other companies for the supply of bio-succinic acid.

We have also entered into technology partnerships to lower our production costs, expand our product portfolio and enhance our biochemical production platform. For example, we entered into a technology partnership with Cargill, Inc., or Cargill, through which we exclusively license a proprietary yeast organism for use in our fermentation process to produce our products. We refer to the yeast organism that we have licensed from Cargill for the production of bio-succinic acid as “our yeast.” We have also established other technology licenses and collaborations, including with

Johnson Matthey Davy Technologies, or Davy.

Our business strategy is to leverage the value of our technology by building and operating production facilities around the world. However, depending on our access to capital and third-party demand for our technology, we may also enter into technology licenses on an opportunistic basis.

We have entered into a joint venture agreement with Mitsui & Co. Ltd. for our facility in Sarnia, Ontario, which has a nameplate capacity of 30,000 metric tons of bio-succinic acid per year. We started commercial scale production at our Sarnia facility in October 2015 and ramp-up to full production capacity is expected in 2018. We terminated production at our large-scale demonstration facility in Pomacle, France at the end of 2014, where we manufactured our bio-succinic acid from 2010 to 2014, prior to the completion of our Sarnia facility. Our joint venture with Mitsui also contemplates the potential construction and operation of an additional facility, which we expect to occur by 2020.

5

We are committed to managing our economic, social, environmental and ethical performance through continued sustainable business practices. We have completed a life cycle analysis for our facility in Sarnia that indicates that no carbon dioxide equivalent (greenhouse gases) will be emitted per kilogram of our bio-succinic acid produced, making our process carbon neutral. This is significantly less carbon emission intensive than the current petrochemical process for making succinic acid, in which 7.1 kilograms of carbon dioxide equivalent are emitted per kilogram of succinic acid produced. This represents a 100% reduction in greenhouse gases for our bio-succinic acid process, relative to the current petrochemical process for making succinic acid. The life cycle analysis also indicates that our facility in Sarnia will consume 64% less energy than the current petrochemical process.

We were incorporated in the State of Delaware in October 2008 as DNP Green Technology, Inc. and were established as the result of a spin-off of certain assets from Diversified Natural Products, Inc. In September 2010, we acquired the 50% interest in our joint venture Bioamber S.A.S. that we did not already own, after which, Bioamber S.A.S. became wholly owned by us. Concurrent with this acquisition, the Company changed its name from DNP Green Technology, Inc. to BioAmber Inc. and changed its fiscal year end from June 30 to December 31. Bioamber S.A.S. was wholly owned by the Company until its liquidation in December 2014.

Our principal executive offices are located at 1250 Rene Levesque West, Suite 4310, Montreal, Quebec, Canada H3B 4W8, and our principal research and development facility is located at 1000 Westgate Drive, Suite 117, St. Paul, Minnesota, United States of America, 55447. Our telephone number in the United States is (651) 641-3623 and our telephone number in Canada is (514) 844-8000. Our website address is www.bio-amber.com. We do not incorporate the information on or accessible through our website into this prospectus, and you should not consider any information on, or that can be accessed through, our website as part of this prospectus.

The Securities We May Offer

We may offer shares of our common stock and preferred stock, various series of warrants to purchase common stock or preferred stock and debt securities, in one or more series, as either senior or subordinated debt or as senior or subordinated convertible debt, either individually or in units, with a total value of up to \$100,000,000 from time to time under this prospectus at prices and on terms to be determined at the time of any offering. This prospectus provides you with a general description of the securities we may offer. Each time we offer a type or series of securities under this prospectus, we will provide a prospectus supplement that will describe the specific amounts, prices and other important terms of the securities.

The prospectus supplement and any related free writing prospectus that we may authorize to be provided to you may also add, update or change information contained in this prospectus or in documents we have incorporated by reference. However, no prospectus supplement or free writing prospectus will offer a security that is not registered and described in this prospectus at the time of the effectiveness of the registration statement of which this prospectus is a part.

We may sell the securities directly to investors or to or through agents, underwriters or dealers. We and our agents or underwriters, reserve the right to accept or reject all or part of any proposed purchase of securities. If we do offer securities to or through agents or underwriters, we will include in the applicable prospectus supplement:

- the names of those agents or underwriters;
- applicable fees, discounts and commissions to be paid to them;
- details regarding over-allotment options, if any; and
- the net proceeds to us.

Common Stock. We may issue shares of our common stock from time to time. Holders of shares of our common stock are entitled to one vote for each share held of record on all matters to be voted on by stockholders and do not have

cumulative voting rights. Subject to the preferences that may be applicable to any then outstanding preferred stock, the holders of our outstanding shares of common stock are entitled to receive dividends, if any, as may be declared from time to time by our board of directors out of legally available funds. In the event of our liquidation, dissolution or winding up, holders of our common stock will be entitled to share ratably in the net assets legally available for distribution to stockholders after the payment of all of our debts and other liabilities, subject to the satisfaction of any liquidation preference granted to the holders of any outstanding shares of preferred stock.

6

Preferred Stock. We may issue shares of our preferred stock from time to time, in one or more series. Our board of directors will determine the rights, preferences and privileges of the shares of each wholly unissued series, and any qualifications, limitations or restrictions thereon, including dividend rights, conversion rights, preemptive rights, terms of redemption or repurchase, liquidation preferences, sinking fund terms and the number of shares constituting any series or the designation of any series. Convertible preferred stock will be convertible into our common stock or exchangeable for other securities. Conversion may be mandatory or at your option and would be at prescribed conversion rates.

If we sell any series of preferred stock under this prospectus, we will fix the rights, preferences and privileges of the preferred stock of such series, as well as any qualifications, limitations or restrictions thereon, in the certificate of designation relating to that series. We will file as an exhibit to the registration statement of which this prospectus is a part, or will incorporate by reference from reports that we file with the SEC, the form of any certificate of designation that describes the terms of the series of preferred stock we are offering before the issuance of that series of preferred stock. We urge you to read the applicable prospectus supplement and any free writing prospectus that we may authorize to be provided to you related to the series of preferred stock being offered, as well as the complete certificate of designation that contains the terms of the applicable series of preferred stock.

Debt Securities. We may issue debt securities, in one or more series, as either senior or subordinated debt or as senior or subordinated convertible debt. In this prospectus, we have summarized certain general features of the debt securities. We urge you, however, to read the applicable prospectus supplement and any free writing prospectus that we may authorize to be provided to you related to the particular series of debt securities being offered, as well as the complete indenture that contains the terms of the debt securities. We will file as exhibits to the registration statement of which this prospectus is a part, the form of indenture and any supplemental agreements that describe the terms of the series of debt securities we are offering before the issuance of the related series of debt securities.

We may evidence each series of debt securities by indentures we will issue. Debt securities may be issued under an indenture that we enter into with a trustee. We will indicate the name and address of the trustee, if applicable, in the prospectus supplement relating to the particular series of debt securities being offered.

Warrants. 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/or debt securities, and the warrants may be attached to or separate from these securities. In this prospectus, we have summarized certain general features of the warrants. We urge you, however, to read the applicable prospectus supplement and any free writing prospectus that we may authorize to be provided to you related to the particular series of warrants being offered, as well as the complete warrant agreements and warrant certificates that contain the terms of the warrants. Forms of the warrant agreements and forms of warrant certificates containing the terms of the warrants being offered will be filed as exhibits to the registration statement of which this prospectus is a part or will be incorporated by reference from reports that we file with the SEC.

We will evidence each series of warrants by warrant certificates that we will issue. Warrants may be issued under an applicable warrant agreement that we enter into with a warrant agent. We will indicate the name and address of the warrant agent, if applicable, in the prospectus supplement relating to the particular series of warrants being offered.

Units. We may issue, in one or more series, units consisting of common stock, preferred stock, debt securities and/or warrants for the purchase of common stock and/or preferred stock in any combination. In this prospectus, we have summarized certain general features of the units. We urge you, however, to read the applicable prospectus supplement (and any free writing prospectus that we may authorize to be provided to you) related to the series of units being

offered, as well as the complete unit agreement that contains the terms of the units. We will file as exhibits to the registration statement of which this prospectus is a part, or will incorporate by reference from reports that we file with the SEC, the form of unit agreement and any supplemental agreements that describe the terms of the series of units we are offering before the issuance of the related series of units.

We will evidence each series of units by unit certificates that we will issue. Units may be issued under a unit agreement that we enter into with a unit agent. We will indicate the name and address of the unit agent, if applicable, in the prospectus supplement relating to the particular series of units being offered.

RISK FACTORS

Investing in our securities involves a high degree of risk. Before purchasing our securities, you should carefully consider the risks and uncertainties set forth under the heading “Risk Factors” in our Annual Report on Form 10-K for the fiscal year ended December 31, 2015, filed with the SEC on March 15, 2016 and our Quarterly Reports on Form 10-Q for the fiscal quarter ended March 31, 2016, filed with the SEC on May 9, 2016, for the fiscal quarter ended June 30, 2016, filed with the SEC on August 9, 2016, and for the fiscal quarter ended September 30, 2016, filed with the SEC on November 7, 2016 which are incorporated by reference in this prospectus, as well as any updates thereto contained in subsequent filings with the SEC or any applicable prospectus supplement or free writing prospectus. If any of these risks were to occur, our business, financial condition or results of operations would likely suffer. In that event, the value of our securities could decline, and you could lose all or part of your investment.

RATIO OF EARNINGS TO FIXED CHARGES

Our ratio of earnings to fixed charges for each of the five most recently completed fiscal years and any required interim periods will each be specified in a prospectus supplement or in a document that we file with the SEC and incorporate by reference pertaining to the issuance, if any, by us of preference securities in the future.

9

USE OF PROCEEDS

Except as described in any prospectus supplement or in any related free writing prospectus that we may authorize to be provided to you, the net proceeds received by us from our sale of the securities described in this prospectus will be added to our general funds and will be used for our general corporate purposes. From time to time, we may engage in additional public or private financings of a character and amount which we may deem appropriate.

DILUTION

If there is a material dilution of the purchasers' equity interest from the sale of common equity securities offered under this prospectus, we will set forth in any prospectus supplement the following information regarding any such material dilution of the equity interests of purchasers securities in an offering under this prospectus:

- the net tangible book value per share of our equity securities before and after the offering;
- the amount of the increase in such net tangible book value per share attributable to the cash payments made by the purchasers in the offering; and
- the amount of the immediate dilution from the public offering price which will be absorbed by such purchasers.

PLAN OF DISTRIBUTION

We may sell the securities from time to time pursuant to underwritten public offerings, negotiated transactions, block trades or a combination of these methods. We may sell the securities to or through underwriters or dealers, through agents, or directly to one or more purchasers. We may distribute securities from time to time in one or more transactions:

- at a fixed price or prices, which may be changed;
- at market prices prevailing at the time of sale;
 - at prices related to such prevailing market prices; or
- at negotiated prices.

Each time we offer and sell securities, we will provide a prospectus supplement that will set forth the terms of the offering of the securities, including:

- the name or names of the underwriters, if any;
- the purchase price of the securities and the proceeds we will receive from the sale;
- any over-allotment options under which underwriters may purchase additional securities;
- any agency fees or underwriting discounts and other items constituting agents' or underwriters' compensation;
- any public offering price;
- any discounts or concessions allowed or re-allowed or paid to dealers; and
- any securities exchange or market on which the securities may be listed.

If underwriters are used in the sale, they will acquire the securities for their own account and may resell the securities from time to time in one or more transactions at a fixed public offering price or at varying prices determined at the time of sale. The obligations of the underwriters to purchase the securities will be subject to the conditions set forth in the applicable underwriting agreement. We may offer the securities to the public through underwriting syndicates represented by managing underwriters or by underwriters without a syndicate. Subject to certain conditions, the underwriters will be obligated to purchase all of the securities offered by the prospectus supplement, other than securities covered by any over-allotment option. Any public offering price and any discounts or concessions allowed or re-allowed or paid to dealers may change from time to time. We may use underwriters with whom we or they have a material relationship. The prospectus supplement, naming the underwriter, will describe the nature of any such relationship.

We may sell securities directly or through agents we or they designate from time to time. The prospectus supplement will name any agent involved in the offering and sale of securities and any commissions we will pay to them. Unless the prospectus supplement states otherwise, any agent will be acting on a best-efforts basis for the period of its appointment.

We may authorize agents or underwriters to solicit offers by certain purchasers to purchase securities from us or them at the public offering price set forth in the prospectus supplement pursuant to delayed delivery contracts providing for payment and delivery on a specified date in the future. The prospectus supplement will set forth the conditions to these contracts and any commissions we must pay for solicitation of these contracts.

We may engage in at the market offerings into an existing trading market in accordance with Rule 415(a)(4) under the Securities Act.

We may provide agents and underwriters with indemnification against civil liabilities, including liabilities under the Securities Act, or contribution with respect to payments that the agents or underwriters may make with respect to these liabilities. Agents and underwriters may engage in transactions with, or perform services for, us in the ordinary course of business.

All securities we may offer, other than common stock, will be new issues of securities with no established trading market. Any underwriters may make a market in these securities, but will not be obligated to do so and may discontinue any market making at any time without notice. We cannot guarantee the liquidity of the trading markets for any securities.

Any underwriter may engage in over-allotment, stabilizing transactions, short-covering transactions and penalty bids in accordance with Regulation M under the Exchange Act. Over-allotment involves sales in excess of the offering size, which create a short position.

12

Stabilizing transactions permit bids to purchase the underlying security so long as the stabilizing bids do not exceed a specified maximum price. Syndicate-covering or other short-covering transactions involve purchases of the securities, either through exercise of the over-allotment option or in the open market after the distribution is completed, to cover short positions. Penalty bids permit the underwriters to reclaim a selling concession from a dealer when the securities originally sold by the dealer are purchased in a stabilizing or covering transaction to cover short positions. Those activities may cause the price of the securities to be higher than it would otherwise be. If commenced, the underwriters may discontinue any of the activities at any time.

Any underwriters that are qualified market makers on the New York Stock Exchange, or NYSE, may engage in passive market making transactions in the common stock on the NYSE in accordance with Regulation M under the Exchange Act, during the business day prior to the pricing of the offering, before the commencement of offers or sales of the common stock. Passive market makers must comply with applicable volume and price limitations and must be identified as passive market makers. In general, a passive market maker must display its bid at a price not in excess of the highest independent bid for such security; if all independent bids are lowered below the passive market maker's bid, however, the passive market maker's bid must then be lowered when certain purchase limits are exceeded. Passive market making may stabilize the market price of the securities at a level above that which might otherwise prevail in the open market and, if commenced, may be discontinued at any time.

DESCRIPTION OF CAPITAL STOCK

General

Our authorized capital stock consists of 250,000,000 shares of common stock, \$0.01 par value per share, and 5,000,000 shares of preferred stock, \$0.01 par value per share. As of December 31, 2016, there were 30,612,733 shares of our common stock outstanding, warrants issued in our December 2016 offering to purchase an aggregate of 2,224,199 shares of common stock, warrants issued as part of the units in our initial public offering, or IPO warrants, to purchase 4,000,000 shares of our common stock and warrants issued prior to our initial public offering, or legacy warrants, to purchase 739,463 shares of our common stock outstanding.

The following summary description of our capital stock is based on the provisions of our amended and restated certificate of incorporation, amended and restated bylaws, form of IPO warrant, legacy warrants and the applicable provisions of the Delaware General Corporation Law. This information is qualified entirely by reference to the applicable provisions of our amended and restated certificate of incorporation, amended and restated bylaws, form of IPO warrant, legacy warrants and the Delaware General Corporation Law. For information on how to obtain copies of our amended and restated certificate of incorporation and amended and restated bylaws, which are exhibits to the registration statement of which this prospectus is a part, see “Where You Can Find Additional Information” and “Incorporation of Certain Information by Reference.”

Common Stock

Holders of our common stock are entitled to one vote for each share of common stock held of record for the election of directors and on all matters submitted to a vote of stockholders. Holders of our common stock do not have cumulative voting rights in the election of directors. Holders of our common stock are entitled to receive dividends ratably, if any, as may be declared by our board of directors out of legally available funds, subject to any preferential dividend rights of any preferred stock then outstanding. Upon our dissolution, liquidation or winding up, holders of our common stock are entitled to share ratably in our net assets legally available after the payment of all our debts and other liabilities, subject to the preferential rights of any preferred stock then outstanding. Holders of our common stock have no preemptive, subscription, redemption or conversion rights. There are no sinking fund provisions applicable to our common stock. 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. Except as described under “—Antitakeover Effects of Delaware Law, Provisions of our Amended and Restated Certificate of Incorporation and Amended and Restated By-laws and French Law Takeover Regulations” below, a majority vote of the holders of common stock is generally required to take action under our amended and restated certificate of incorporation and amended and restated by-laws.

IPO Warrants

The following description of our IPO warrants is subject to, and qualified in its entirety by, the form of IPO warrant, which was filed as an exhibit to our registration statement on Form S-1, file number 333-177917. You should review a copy of the form of IPO warrant for a complete description of the terms and conditions applicable to the IPO warrants.

Term. The IPO warrants are exercisable during the period beginning on August 8, 2013 and ending at 5:30 P.M. on May 9, 2017. The term can also be extended by us at our sole discretion.

Anti-Dilution Protection. The IPO warrants contain full ratchet anti-dilution protection upon the issuance of any common stock, securities convertible into common stock or certain other issuances at a price below the then-existing exercise price of the IPO warrants, with certain exceptions.

Exercise Price. The exercise price of the IPO warrants was initially \$11.00 per whole share of common stock. On May 6, 2015, we completed the closing of a follow-on public offering and issued 3,900,000 shares of common stock, at an offering price to the public of \$9.00 per share. The completion of this follow-on public offering triggered an adjustment to the exercise price of the outstanding IPO warrants. The exercise price of the IPO warrants was reduced from \$11.00 per whole share of common stock to \$9.00 per whole share of common stock, pursuant to the terms of such warrants. On January 21, 2016, we completed the closing of a follow-on public offering and issued 2,600,000 shares of common stock, at an offering price to the public of \$5.00 per share. The exercise price of the IPO warrants was reduced from \$9.00 per whole share of common stock to \$5.00 per whole share of common stock, pursuant to the terms of such warrants. On December 29, 2016, we completed the closing of underwritten registered offerings and issued 1,748,750 shares of common stock, at an offering price of \$4.00 per share, and warrants to purchase 2,224,199 shares of common stock at an

14

initial exercise price of \$4.00 per share. The exercise price of the IPO warrants was reduced from \$5.00 per whole share of common stock to \$4.00 per whole share of common stock, pursuant to the terms of such warrants. The exercise price is subject to appropriate adjustment in the event of certain stock dividends and distributions, stock splits, stock combinations, stock issuances, reclassifications or similar events affecting our common stock, as well as the anti-dilution protection described above. The exercise price can also be lowered by us at our sole discretion.

Exercisability. The IPO warrants became exercisable on August 8, 2013 and are exercisable at any time during the applicable term of the IPO warrant. The IPO warrants are exercisable, at the option of each holder, in whole or in part, by delivering to us a duly executed exercise notice accompanied by payment in full for the number of shares of our common stock purchased upon such exercise.

No Fractional Shares. No fractional shares or scrip representing fractional shares shall be issued upon the exercise of the IPO warrants. As to any fraction of a share which the holder would otherwise be entitled to purchase upon such exercise, we shall, at our election, either pay a cash adjustment in respect of such final fraction in an amount equal to such fraction multiplied by the exercise price of the IPO warrant or round up to the next whole share.

Transferability. Subject to applicable laws and the restriction on transfer set forth in the IPO warrants, the IPO warrants may be transferred at the option of the holder upon surrender of the IPO warrants to us together with the appropriate instruments of transfer.

Authorized Shares. During the period the IPO warrants are outstanding, we will reserve from our authorized and unissued common stock a sufficient number of shares to provide for the issuance of shares of common stock underlying the IPO warrants upon the exercise of the IPO warrants.

Exchange Listing. The IPO warrants are listed on NYSE under the symbol "BIOA.WS".

Fundamental Transactions. In the event of any fundamental transaction, as described in the IPO warrants and generally including any merger with or into another entity, sale of all or substantially all of our assets, tender offer or exchange offer, or reclassification of our common stock, then upon any subsequent exercise of an IPO warrant the holder shall have the right to receive as alternative consideration, for each share of our common stock that would have been issuable upon such exercise immediately prior to the occurrence of such fundamental transaction, the number of shares of common stock of the successor or acquiring corporation or of BioAmber, if it is the surviving corporation, and any additional consideration receivable upon or as a result of such transaction by a holder of the number of shares of our common stock for which the IPO warrant is exercisable immediately prior to such event. In addition, in the event of a fundamental transaction in which the amount of the alternate consideration is less than the exercise price of the warrant, then we or any successor entity shall pay at the holder's option, exercisable at any time concurrently with or within ninety (90) days after the consummation of the fundamental transaction, an amount of cash equal to the value of the IPO warrant as determined in accordance with the Black Scholes option pricing model.

Right as a Stockholder. Except as otherwise provided in the IPO warrants or by virtue of such holder's ownership of shares of our common stock, the holders of the IPO warrants do not have the rights or privileges of holders of our common stock, including any voting rights, until they exercise their IPO warrants.

Waivers and Amendments. Any term of the IPO warrants may be amended or waived with our written consent and the written consent of holders representing 66 2/3% of the shares of common stock issuable upon exercise of the IPO warrants then outstanding. The foregoing notwithstanding, we may extend the termination date and reduce the exercise price without the consent of the holders.

Enforceability of Rights by Holders of IPO Warrants. Each IPO warrant agent will act solely as our agent under the applicable IPO warrant agreement and will not assume any obligation or relationship of agency or trust with any holder of any IPO warrant. A single bank or trust company may act as IPO warrant agent for more than one issue of IPO warrants. A IPO warrant agent will have no duty or responsibility in case of any default by us under the applicable IPO warrant agreement or IPO warrant, including any duty or responsibility to initiate any proceedings at law or otherwise, or to make any demand upon us. Any holder of an IPO warrant may, without the consent of the related IPO warrant agent or the holder of any other IPO warrant, enforce by appropriate legal action its right to exercise, and receive the securities purchasable upon exercise of, its IPO warrants.

15

Legacy Warrants

As of December 31, 2016, legacy warrants to purchase 264,961 shares of our common stock at an exercise price of \$1.07, legacy warrants to purchase 159,390 shares of our common stock at an exercise price of \$1.43 per share, legacy warrants to purchase 219,264 shares of our common stock at an exercise price of \$5.47 per share, and legacy warrants to purchase 111,434 shares of our common stock at an exercise price of \$8.97 per share were outstanding. Some of these legacy warrants have a net exercise provision under which its holder may, in lieu of payment of the exercise price in cash, surrender the legacy warrant and receive a net amount of shares based on the fair market value of our common stock at the time of exercise of the legacy warrant after deduction of the aggregate exercise price. Each warrant contains provisions for the adjustment of the exercise price and the number of shares issuable upon the exercise of the legacy warrant in the event of certain stock dividends, stock splits, reorganizations, reclassifications and consolidations. Certain legacy warrants contain proportionate adjustment anti-dilution protection upon the issuance of any common stock, securities convertible into common stock or certain other issuances at a price below the then-existing exercise price of the IPO warrants, with certain exceptions. Certain holders of the shares issuable upon exercise of our legacy warrants are entitled to registration rights with respect to such shares as described in greater detail under the heading “—Registration Rights” below.

Preferred Stock

Pursuant to our amended and restated certificate of incorporation, our board of directors has the authority, without further action by the stockholders (unless such stockholder action is required by applicable law or NYSE rules), to designate and issue up to 5,000,000 shares of preferred stock in one or more series, to establish from time to time the number of shares to be included in each such series, to fix the rights, preferences and privileges of the shares of each wholly unissued series, and any qualifications, limitations or restrictions thereon, and to increase or decrease the number of shares of any such series, but not below the number of shares of such series then outstanding.

We will fix the rights, preferences and privileges of the preferred stock of each such series, as well as any qualifications, limitations or restrictions thereon, in the certificate of designation relating to that series. We will file as an exhibit to the registration statement of which this prospectus is a part, or will incorporate by reference from reports that we file with the SEC, the form of any certificate of designation that describes the terms of the series of preferred stock we are offering before the issuance of that series of preferred stock. This description will include:

- the title and stated value;
- the number of shares we are offering;

- 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 exchangeable into debt securities, and, if applicable, the exchange price, or how it will be calculated, and the exchange 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;

16

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 the 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.

The General Corporation Law of the State of Delaware, the state of our incorporation, provides that the holders of preferred stock will have the right to vote separately as a class (or, in some cases, as a series) on an amendment to our amended and restated certificate of incorporation if the amendment would change the par value, the number of authorized shares of the class or the powers, preferences or special rights of the class or series so as to adversely affect the class or series, as the case may be. This right is in addition to any voting rights that may be provided for in the applicable certificate of designation.

17

Our board of directors may authorize the issuance of preferred stock with voting or conversion rights that could adversely affect the voting power or other rights of the holders of our common stock. The issuance of preferred stock, while providing flexibility in connection with possible acquisitions and other corporate purposes, could, among other things, have the effect of delaying, deferring or preventing a change in our control and may adversely affect the market price of the common stock and the voting and other rights of the holders of common stock. Additionally, the issuance of preferred stock may have the effect of decreasing the market price of our common stock.

Stock and Warrant Issuances

On June 22, 2009, we issued 35 shares of common stock, a secured convertible promissory note and warrants to purchase 208,985 shares of common stock in a private placement to FCPR Sofinnova Capital VI for gross proceeds of \$4,201,000. The note matured October 30, 2009 and was converted into 696,500 shares of common stock in connection with the October 22, 2009 transaction described below. The warrants are exercisable for 208,985 common stock at \$5.74 per share and have a 10 year term.

On October 22, 2009, we issued an aggregate of 2,089,570 shares of common stock in a private placement at a per share price of \$5.74 for aggregate consideration of \$12 million. The transaction included the issuance of 695,500 shares of common stock upon the conversion of a promissory note issued on June 22, 2009 with an aggregate principal amount of \$4 million and a conversion price of \$5.74 per share. The table below sets forth the purchase price and the shares of common stock issued to our directors, executive officers, beneficial owners of more than 5% of our voting capital stock and their affiliates and other holders of registration rights described below under the caption “Registration Rights” in the transaction.

	Shares of Common Purchase Stock	Price
FCPR Sofinnova Capital VI	1,393,035	\$8,000,102(1)
MCVP Technology Fund I, LLC	348,250	1,999,950
Clifton Equities Inc.	87,080	499,839

(1) Includes amounts converted from promissory note issued June 22, 2009.

On November 23, 2010, we issued unsecured convertible promissory notes in a private placement for aggregate proceeds of \$4 million. The promissory notes were converted into an aggregate of 379,155 shares of common stock and warrants to purchase 94,745 shares of common stock at an exercise price of \$10.55 with a 10 year term in connection with the April 15, 2011 transaction described below. The table below sets forth the principal amount of the promissory notes issued to our directors, executive officers, beneficial owners of more than 5% of our voting capital stock and their affiliates and other holders of registration rights described below under the caption “Registration Rights” as well as the number of shares of common stock and warrants to purchase common stock into which the promissory notes were converted.

Principal Amount of Promissory Note	Shares of Common Stock	Warrants to Purchase Common
--	---------------------------	--------------------------------

Stock

FCPR Sofinnova Capital VI	\$2,932,242	278,005	69,475
MCVP Technology Fund I, LLC	\$665,128	63,035	15,750
Jean-François Huc	\$25,000	2,345	595
Michael Hartmann	\$25,000	2,345	595

18

On April 15, 2011, we issued an aggregate of 4,266,640 shares of common stock and warrants for 94,745 shares of common stock in a private placement at a per share price of \$10.55 for aggregate consideration of \$45 million. The table below sets forth the purchase price and number of shares issued to our directors, executive officers and beneficial owners of more than 5% of our voting capital stock and their affiliates in and other holders of registration rights described below under the caption "Registration Rights" in the transaction.

	Shares of Common Stock Total	
	Purchased	Purchase Price
Naxamber S.A.	2,370,375	\$25,000,006.50
FCPR Sofinnova Capital VI	932,050	\$9,830,198.20
Mitsui & Co., Ltd.	758,520	\$8,000,002.08
MCVP Technology Fund I, LLC	151,690	\$1,599,852.76
Jean-François Huc	2,345	\$24,732.38
Mike Hartmann	2,345	\$24,732.38
Clifton Equities Inc.	24,570	\$699,999.30

On November 4, 2011, we issued an aggregate of 702,135 shares of common stock in a private placement at a per share price of \$28.49 for aggregate proceeds of approximately \$20 million. The table below sets forth the shares of common stock issued to and the aggregate price paid by our directors, executive officers, beneficial owners of more than 5% of our voting capital stock and their affiliates and other holders of registration rights described below under the caption "Registration Rights".

	Shares of Common Stock Total	
	Purchased	Purchase Price
Naxamber S.A.	428,295	\$12,200,289
FCPR Sofinnova Capital VI	214,165	\$6,100,643
Mitsui & Co., Ltd.	35,105	\$999,991
Clifton Equities Inc.	47,425	\$500,338

On February 6, 2012, we issued in a private placement an aggregate of 351,050 shares of common stock at a per share cost of \$28.49 to LANXESS Corporation for aggregate consideration of \$10 million.

Registration Rights

The holders of an aggregate of 8,488,213 shares of our common stock, including shares of common stock described above under the caption "Stock and Warrant Issuances," shares of common stock issuable upon exercise of our legacy warrants, and/or their permitted transferees, are entitled to rights with respect to the registration of these shares under

the Securities Act for resale to the public. These shares are referred to as registrable securities. All of these rights are provided under the terms of our amended and restated shareholders' agreement between us and the holders of these shares, and include demand registration rights, piggyback registration rights and Form S-3 registration rights, in each case as described below.

This registration statement may be used by selling stockholders who acquired shares of our common stock or securities exercisable for shares of our common stock in the transactions described above under the caption "Stock and Warrant Issuances" or upon the exercise of certain of our legacy warrants. Such selling stockholders, if any, will be identified in accordance with rules promulgated under the Securities Act of 1933, as amended.

Demand Registration Rights

The holders of a majority of the registrable securities, or initiating holders, subject to certain limitations, have the right to demand that we file a registration statement covering the registration of at least 10% of the registrable securities then outstanding and having an aggregate price to the public of not less than \$15.0 million. We will not be required to effect a registration if (1) we have effected three registrations that have been declared effective and have remained effective until the holders have completed the distribution related thereto, (2) our board of directors, in its reasonable judgment, determines that it would be detrimental to us and our stockholders for

such registration statement to be effected at such time, in which case we have the right to defer such filing for up to 90 days following receipt of the demand request from the holders and (3) the initiating holders propose to dispose of registrable securities that are immediately registrable on Form S-3.

Piggyback Registration Rights

Subject to certain limitations, if at any time we file a registration statement for a public offering of any of our securities, other than a registration statement relating to our employee benefit plan, a corporate reorganization or other transaction under Rule 145 of the Securities Act, the holders of registrable securities will have the right to include all or any part of their registrable securities in the registration statement. The underwriters of any underwritten offering will have the right to limit the number of shares having registration rights to be included in the registration statement to an amount not below 20% of the total number of shares included in the registration statement.

Form S-3 Registration Rights

At any time after we become eligible to file a registration statement on Form S-3, any holder or holders of registrable securities for which a Form S-3 is available may require us to file such a registration statement having an aggregate price to the public of not less than \$1.0 million. We are not obligated to file more than two Form S-3 registration statements in any twelve-month period. In addition, we will not be obligated to effect a registration if (1) a Form S-3, is not available for such offering by the holder or holders, (2) our board of directors, in its reasonable judgment, determines that it would be detrimental to us and our stockholders for such registration statement to be effected at such time, in which case we have the right to defer such filing for up to 90 days following receipt of the Form S-3 demand request from the holder or holders and (3) with respect to a particular jurisdiction, we would be required to qualify to do business or to execute a general consent to service of process in effecting such registration, qualification or compliance.

Registration Expenses

We are generally required to bear the expenses of all registrations, including the expense of a single special counsel to the holders of each registration not to exceed \$75,000 per registration. However, we will not be required to pay for underwriting discounts and commissions or expenses in connection with the exercise of demand and piggyback registration rights if the request is subsequently withdrawn by the holders of a majority of the registrable securities, subject to limited exceptions.

Antitakeover Effects of Delaware Law, Provisions of our Amended and Restated Certificate of Incorporation and Amended and Restated By-laws and French Law Takeover Regulations

Certain provisions of the Delaware General Corporation Law and of our amended and restated certificate of incorporation and amended and restated by-laws 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 of directors. 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.

Delaware Takeover Statute

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 time of determination of interested stockholder status, 15% or more of the

20

corporation's outstanding 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 time the stockholder became interested, the board of directors 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 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 directors 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.

Provisions of Our Amended and Restated Certificate of Incorporation and Amended and Restated By-laws

Our amended and restated certificate of incorporation and amended and restated by-laws to be in effect upon completion of this offering will include a number of provisions that may have the effect of delaying, deferring or discouraging another party from acquiring control of us and encouraging persons considering unsolicited tender offers or other unilateral takeover proposals to negotiate with our board of directors rather than pursue non-negotiated takeover attempts. These provisions include the items described below.

Board composition and filling vacancies. In accordance with our amended and restated certificate of incorporation, our board is divided into three classes serving staggered three-year terms, with one class being elected each year. Our amended and restated certificate of incorporation also provides that directors may be removed only for cause and then only by the affirmative vote of the holders of 75% or more of the shares then entitled to vote at an election of directors. Furthermore, any vacancy on our board of directors, however occurring, including a vacancy resulting from an increase in the size of our board, may only be filled by the affirmative vote of a majority of our directors then in office even if less than a quorum.

No written consent of stockholders. Our amended and restated certificate of incorporation provides that all stockholder actions are required to be taken by a vote of the stockholders at an annual or special meeting, and that stockholders may not take any action by written consent in lieu of a meeting. This limit may lengthen the amount of time required to take stockholder actions and would prevent the amendment of our by-laws or removal of directors by our stockholder without holding a meeting of stockholders.

Meetings of stockholders. Our amended and restated by-laws provide that only a majority of the members of our board of directors then in office may call special meetings of stockholders and only those matters set forth in the notice of the special meeting may be considered or acted upon at a special meeting of stockholders. Our amended and restated by-laws limit the business that may be conducted at an annual meeting of stockholders to those matters properly brought before the meeting.

Advance notice requirements. Our amended and restated by-laws establish advance notice procedures with regard to stockholder proposals relating to the nomination of candidates for election as directors or new business to be brought before meetings of our stockholders. These procedures provide that notice of stockholder proposals must be timely given in writing to our corporate secretary prior to the meeting at which the action is to be taken. Generally, to be timely, notice must be received at our principal executive offices not less than 90 days or more than 120 days prior to the first anniversary date of the annual meeting for the preceding year. The notice must contain certain information specified in our amended and restated by-laws.

Adjournment of stockholders meetings. Our amended and restated by-laws give the presiding officer at the stockholders' meeting the authority to reschedule or adjourn such meeting if: no quorum is present for the transaction of business; the board determines that an adjournment is necessary or appropriate to enable the stockholders to consider fully information which the board determines has not been made sufficiently or timely available to stockholders; or the board determines that adjournment is otherwise in the best interests of the company. This limit may lengthen the amount of time required to take stockholder actions.

Amendment to certificate of incorporation and by-laws. As required by the Delaware General Corporation Law, any amendment of our amended and restated certificate of incorporation must first be approved by a majority of our board of directors, and if required by law or our amended and restated certificate of incorporation, must 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 as a class, except that

21

the amendment of the provisions relating to stockholder action, directors, limitation of liability, the exclusive jurisdiction of Delaware courts and the amendment of our amended and restated certificate of incorporation or our amended and restated by-laws must be approved by not less than 75% of the outstanding shares entitled to vote on the amendment, and not less than 75% of the outstanding shares of each class entitled to vote thereon as a class. Our amended and restated by-laws may be amended by the affirmative vote of a majority vote of the directors then in office, subject to any limitations set forth in the by-laws; and may also be amended by the affirmative vote of at least 75% of the outstanding shares entitled to vote on the amendment, or, if the board of directors recommends that the stockholders approve the amendment, by the affirmative vote of the majority of the outstanding shares entitled to vote on the amendment, in each case voting together as a single class.

Undesignated preferred stock. Our amended and restated certificate of incorporation provides for authorized shares of preferred stock. The existence of authorized but unissued shares of preferred stock may enable our board of directors 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 of directors were to determine that a takeover proposal is not in the best interests of us or our stockholders, our board of directors 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 or insurgent stockholder or stockholder group. In this regard, our amended and restated certificate of incorporation grants our board of directors broad power to establish the rights and preferences of authorized and unissued shares of preferred stock. 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.

Squeeze-Out Provisions

Section 253 of the Delaware General Corporation Law authorizes the board of directors of a Delaware corporation that owns 90% or more of each of the outstanding classes of stock of a subsidiary that are entitled to vote on a merger to merge the subsidiary into itself without any requirement for action to be taken by the board of directors or the stockholders of the subsidiary.

Exclusive Jurisdiction of Delaware Courts

Our amended and restated certificate of incorporation provides that, unless we consent in writing to an alternative forum, the Court of Chancery of the State of Delaware shall be the sole and exclusive forum for (1) any derivative action or proceeding brought on behalf of our company, (2) any action asserting a claim of breach of a fiduciary duty owed by any director, officer or other employee of our company to the company or the company's stockholders, (3) any action asserting a claim arising pursuant to any provision of the Delaware General Corporation Law or our amended and restated certificate of incorporation or our amended and restated by-laws, or (4) any action asserting a claim against our company or any of our directors or officers governed by the internal affairs doctrine. Any person or entity purchasing or otherwise acquiring any interest in shares of our capital stock shall be deemed to have notice of and consented to the forum provisions in our amended and restated certificate of incorporation. However, the enforceability of similar forum provisions in other companies' certificates of incorporation has been challenged in legal proceedings, and it is possible that a court could find these types of provisions to be unenforceable.

Transfer Agent and Registrar

The transfer agent and registrar for our common stock and IPO warrants is Computershare Trust Company, N.A.

Listing

Our common stock is listed on the New York Stock Exchange, or NYSE, under the symbol “BIOA.”

22

DESCRIPTION OF OUR DEBT SECURITIES

The following description, together with the additional information we include in any applicable prospectus supplements or free writing prospectuses that we may authorize to be distributed to purchasers, summarizes the material terms and provisions of the debt securities that we may offer under this prospectus. We may issue debt securities, in one or more series, as either senior or subordinated debt or as senior or subordinated convertible debt. We refer to the senior and subordinated debt and senior and subordinated convertible debt collectively as debt securities. While the terms we have summarized below will generally apply to any future debt securities we may offer under this prospectus, a prospectus supplement or free writing prospectus will describe the particular terms of any debt securities that we may offer in more detail in the applicable prospectus supplement or free writing prospectus. The terms of any debt securities we offer under a prospectus supplement or free writing prospectus may differ from the general terms we describe below.

We may issue senior debt securities from time to time, in one or more series, under a senior indenture to be entered into between us and a senior trustee to be named in a prospectus supplement, which we refer to as the senior trustee. We may issue subordinated debt securities from time to time, in one or more series, under a subordinated indenture to be entered into between us and a subordinated trustee to be named in a prospectus supplement, which we refer to as the subordinated trustee. The forms of senior indenture and subordinated indenture are filed as exhibits to this registration statement of which this prospectus forms a part. Together, the senior indenture and the subordinated indenture are referred to as the indentures and, together, the senior trustee and the subordinated trustee are referred to as the trustees. This prospectus briefly outlines some of the provisions of the indentures.

None of the indentures will limit the amount of debt securities that we may issue. The applicable indenture will provide that debt securities may be issued up to an aggregate principal amount authorized from time to time by us and may be payable in any currency or currency unit designated by us or in amounts determined by reference to an index.

The following summaries of material provisions of the senior debt securities, the subordinated debt securities and the indentures are subject to, and qualified in their entirety by reference to, all of the provisions of the indenture applicable to a particular series of debt securities. We urge you to read the applicable prospectus supplement or free writing prospectus and any related free writing prospectuses related to the debt securities that we may offer under this prospectus, as well as the complete applicable indenture that contains the terms of the debt securities.

General

We will describe in the applicable prospectus supplement or free writing prospectus the terms of the series of debt securities being offered, including:

- the title;
- the principal amount being offered, and if a series, the total amount authorized and the total amount outstanding;
- any limit on the amount that may be issued;
- whether or not we will issue the series of debt securities in global form, and, if so, the terms and who the depository will be;
- the maturity date;
- whether and under what circumstances, if any, we will pay additional amounts on any debt securities held by a person who is not a United States person for tax purposes, and whether we can redeem the debt securities if we have to pay such additional amounts;

•

the annual interest rate, which may be fixed or variable, or the method for determining the rate and the date interest will begin to accrue, the dates interest will be payable and the regular record dates for interest payment dates or the method for determining such dates;

- whether or not the debt securities will be secured or unsecured, and the terms of any secured debt;
- the terms of the subordination of any series of subordinated debt;
- the place where payments will be payable;
- restrictions on transfer, sale or other assignment, if any;

23

our right, if any, to defer payment of interest and the maximum length of any such deferral period;

the date, if any, after which, the conditions upon which, and the price at which, we may, at our option, redeem the series of debt securities pursuant to any optional or provisional redemption provisions and the terms of those redemption provisions;

the date, if any, on which, and the price at which we are obligated, pursuant to any mandatory sinking fund or analogous fund provisions or otherwise, to redeem, or at the holder's option, to purchase, the series of debt securities and the currency or currency unit in which the debt securities are payable;

- whether the indenture will restrict our ability or the ability of our subsidiaries to:

incur additional indebtedness;

issue additional securities;

create liens;

pay dividends or make distributions in respect of our capital stock or the capital stock of our subsidiaries;

redeem capital stock;

place restrictions on our subsidiaries' ability to pay dividends, make distributions or transfer assets;

make investments or other restricted payments;

sell or otherwise dispose of assets;

enter into sale-leaseback transactions;

engage in transactions with stockholders or affiliates;

issue or sell stock of our subsidiaries; or

effect a consolidation or merger;

whether the indenture will require us to maintain any interest coverage, fixed charge, cash flow-based, asset-based or other financial ratios;

a discussion of certain material or special United States federal income tax considerations applicable to the debt securities;

information describing any book-entry features;

provisions for a sinking fund purchase or other analogous fund, if any;

the applicability of the provisions in the indenture on discharge;

whether the debt securities are to be offered at a price such that they will be deemed to be offered at an "original issue discount" as defined in paragraph (a) of Section 1273 of the Internal Revenue Code of 1986, as amended;

the denominations in which we will issue the series of debt securities, if other than denominations of \$1,000 and any integral multiple thereof;

the currency of payment of debt securities if other than U.S. dollars and the manner of determining the equivalent amount in U.S. dollars; and

any other specific terms, preferences, rights or limitations of, or restrictions on, the debt securities, including any additional events of default or covenants provided with respect to the debt securities, and any terms that may be required by us or advisable under applicable laws or regulations or advisable in connection with the marketing of the debt securities.

We may, from time to time, without notice to or the consent of the holders of any series of debt securities, create and issue further debt securities of any such series ranking equally with the debt securities of such series in all respects (or in all respects other than (a) the payment of interest accruing prior to the issue date of such further debt securities or (b) the first payment of interest following the issue date of such further debt securities). Such further debt securities may be consolidated and form a single series with the debt securities of such series and have the same terms as to status, redemption or otherwise as the debt securities of such series.

Certain Terms of the Senior Debt Securities

Conversion or Exchange Rights. We will set forth in the applicable prospectus supplement or free writing prospectus the terms on which a series of senior debt securities may be convertible into or exchangeable for our common stock, our preferred stock or other securities (including securities of a third-party). We will include provisions as to whether conversion or exchange is mandatory, at the option of the holder or at our option. We may include provisions pursuant to which the number of shares of our common stock, our preferred stock or other securities (including securities of a third-party) that the holders of the series of senior debt securities receive would be subject to adjustment.

Consolidation, Merger or Sale. Unless we provide otherwise in the prospectus supplement or free writing prospectus applicable to a particular series of senior debt securities, the senior debt securities will not contain any covenant that restricts our ability to merge or consolidate, or sell, convey, transfer or otherwise dispose of all or substantially all of our assets. However, any successor to or acquirer of such assets must assume all of our obligations under the senior indentures or the senior debt securities, as appropriate. If the senior debt securities are convertible into or exchangeable for other securities of ours or securities of other entities, the person with whom we consolidate or merge or to whom we sell all of our property must make provisions for the conversion of the senior debt securities into securities that the holders of the senior debt securities would have received if they had converted the senior debt securities before the consolidation, merger or sale.

No Protection in the Event of a Change in Control. Unless we indicate otherwise in a prospectus supplement or free writing prospectus applicable to a particular series of senior debt securities, the senior debt securities will not contain any provisions that may afford holders of the senior debt securities protection in the event we have a change in control or in the event of a highly leveraged transaction (whether or not such transaction results in a change in control).

Events of Default. Unless we provide otherwise in the prospectus supplement or free writing prospectus applicable to a particular series of senior debt securities, the following are events of default under the senior indentures with respect to any series of senior debt securities that we may issue:

- if we fail to pay interest when due and payable and our failure continues for 90 days (or such other period as may be specified for such series) and the time for payment has not been extended;

- if we fail to pay the principal, premium or sinking fund payment, if any, when due and payable at maturity, upon redemption or repurchase or otherwise (and, if specified for such series, the continuance of such failure for a specified period), and the time for payment has not been extended;

- if we fail to observe or perform any other covenant contained in the senior debt securities or the senior indentures, other than a covenant that is specifically dealt with elsewhere in the senior indenture, and our failure continues for 90 days after we receive notice from the trustee or holders of at least 25% in aggregate principal amount of the outstanding senior debt securities of the applicable series; and

- if specified events of bankruptcy, insolvency or reorganization occur.

We will describe in each applicable prospectus supplement or free writing prospectus any additional events of default relating to the relevant series of senior debt securities.

If an event of default with respect to senior debt securities of any series occurs and is continuing, other than an event of default specified in the last bullet point above, the trustee or the holders of at least 25% in aggregate principal amount of the outstanding senior debt securities of that series, by notice to us in writing, and to the trustee if notice is given by such holders, may declare the unpaid principal, premium, if any, and accrued interest, if any, due and payable immediately. If an event of default specified in the last bullet point above occurs with respect to us, the unpaid principal, premium, if any, and accrued interest, if any, of each issue of senior debt securities then outstanding

shall be due and payable without any notice or other action on the part of the trustee or any holder.

Unless otherwise specified in the prospectus supplement or free writing prospectus applicable to a particular series of senior debt securities originally issued at a discount, the amount due upon acceleration shall include only the original issue price of the senior debt securities, the amount of original issue discount accrued to the date of acceleration and accrued interest, if any.

The holders of a majority in principal amount of the outstanding senior debt securities of an affected series may waive any default or event of default with respect to the series and its consequences, except defaults or events of default regarding payment of principal,

25

premium, if any, or interest, unless we have cured the default or event of default in accordance with the senior indenture. Any waiver shall cure the default or event of default.

Upon certain conditions, declarations of acceleration may be rescinded and annulled and past defaults may be waived by the holders of a majority in aggregate principal amount of all the senior debt securities of such series affected by the default. Furthermore, prior to a declaration of acceleration and subject to various provisions in the senior indenture, the holders of a majority in aggregate principal amount of a series of senior debt securities, by notice to the trustee, may waive an existing default or event of default with respect to such senior debt securities and its consequences, except a default in the payment of principal of, premium, if any, on or interest on such senior debt securities. Upon any such waiver, such default shall cease to exist, and any event of default with respect to such senior debt securities shall be deemed to have been cured, for every purpose of the senior indenture, but no such waiver shall extend to any subsequent or other default or event of default or impair any right consequent thereto.

The holders of a majority in aggregate principal amount of a series of senior debt securities will have the right to direct the time, method and place of conducting any proceeding for any remedy available to the trustee or exercising any trust or power conferred on the trustee with respect to such senior debt securities. However, the trustee may refuse to follow any direction that conflicts with law or the senior indenture that may involve the trustee in personal liability or that the trustee determines in good faith may be unduly prejudicial to the rights of holders of such series of senior debt securities not joining in the giving of such direction and may take any other action it deems proper that is not inconsistent with any such direction received from holders of such series of senior debt securities. A holder of the senior debt securities of any series will have the right to institute a proceeding under the senior indentures or to appoint a receiver or trustee, or to seek other remedies if:

- the holder has given written notice to the trustee of a continuing event of default with respect to that series;
- the holders of at least 25% in aggregate principal amount of the outstanding senior debt securities of that series have made written request, and such holders have offered reasonable indemnity to the trustee or security satisfactory to it against any loss, liability or expense or to be incurred in compliance with instituting the proceeding as trustee; and
- the trustee does not institute the proceeding, and does not receive from the holders of a majority in aggregate principal amount of the outstanding senior debt securities of that series other conflicting directions within 90 days after the notice, request and offer.

These limitations do not apply to a suit instituted by a holder of senior debt securities if we default in the payment of the principal, premium, if any, or interest on, the senior debt securities, or other defaults that may be specified in the applicable prospectus supplement or free writing prospectus.

Modification and Waiver. We and the trustee may amend, supplement or modify a senior indenture or the senior debt securities without the consent of any holders with respect to the following specific matters:

- to fix any ambiguity, defect or inconsistency in the senior indenture or to conform the senior indenture or the senior debt securities to the description of senior debt securities of such series set forth in this prospectus or any applicable prospectus supplement or any free writing supplement;
- to convey, transfer, assign, mortgage or pledge any assets as security for the senior debt securities of one or more series;
 - to add to, delete from or revise the conditions, limitations, and restrictions on the authorized amount, terms, or purposes of issue, authentication and delivery of senior debt securities;
- to evidence the succession of another corporation, and the assumption by such successor corporation of our covenants, agreements and obligations under the senior indenture;
- to provide for or add guarantors with respect to the senior debt securities of any series;
- to establish the form of any certifications required to be furnished pursuant to the terms of the senior indenture or any series of senior debt securities, or to add to the rights of the holders of any series of senior debt securities;

to evidence and provide for the acceptance of appointment hereunder by a successor trustee or to make such changes as shall be necessary to provide for or facilitate the administration of the trusts in the senior indenture by more than one trustee;

to make any change to the senior debt securities of any series, so long as no senior debt securities of such series are outstanding

26

- to provide for uncertificated senior debt securities and to make all appropriate changes for such purpose;
- to add to our covenants such new covenants, restrictions, conditions or provisions for the benefit of the holders, to make the occurrence, or the occurrence and the continuance, of a default in any such additional covenants, restrictions, conditions or provisions an event of default or to surrender any right or power conferred to us in the senior indenture; or
- to change anything that does not materially adversely affect the interests of any holder of senior debt securities of any series.

Other amendments and modifications of the senior indenture or the senior debt securities issued may be made, and our compliance with any provision of the senior indenture with respect to any series of senior debt securities may be waived, with the consent of the holders of a majority of the aggregate principal amount of the outstanding senior debt securities of all series affected by the amendment or modification (voting together as a single class); provided, however, that each affected holder must consent to any modification, amendment or waiver that:

- extends the stated maturity of any senior debt securities;
- reduces the principal amount, reducing the rate of or extending the time of payment of interest, or reducing any premium payable upon the redemption or repurchase of any senior debt securities;

- reduces the rate or extends the time of payment of interest on any senior debt securities; or
- reduces the percentage of senior debt securities, the holders of which are required to consent to any amendment, supplement, modification or waiver.

Satisfaction and Discharge. We can elect satisfy and discharge our obligations with respect to one or more series of senior debt securities, except for specified obligations, including obligations to:

- register the transfer or exchange of debt securities of the series;
- replace stolen, lost or mutilated debt securities of the series;
- maintain paying agencies;
- hold monies for payment in trust;
- recover excess money held by the trustee;
- compensate and indemnify the trustee; and
- appoint any successor trustee.

In order to exercise our rights to be discharged, we must deposit with the trustee money or government obligations sufficient to pay all the principal of, any premium and interest on, the senior debt securities of the series on the dates payments are due.

Under current U.S. federal income tax law, the deposit and our legal release from the senior debt securities would be treated as though we took back a holder's senior debt securities and gave such holder his or her share of the cash and debt securities or bonds deposited in trust. In that event, such holder could recognize gain or loss on the senior debt securities such holder gives back to us. Holders of the senior debt securities should consult their own advisers with respect to the tax consequences to them of such deposit and discharge, including the applicability and effect of tax laws other than the U.S. federal income tax law.

Information Concerning the Trustee. The trustee, other than during the occurrence and continuance of an event of default under a senior indenture, undertakes to perform only those duties as are specifically set forth in the applicable senior indenture. Upon an event of default under a senior indenture, the trustee must use the same degree of care as a prudent person would exercise or use in the conduct of his or her own affairs.

Subject to this provision, the trustee is under no obligation to exercise any of the powers given it by the senior indentures at the request of any holder of senior debt securities unless it is offered reasonable security and indemnity

against the costs, expenses and liabilities that it might incur.

We may have normal banking relationships with the trustee in the ordinary course of business.

27

Certain Terms of the Subordinated Debt Securities

Other than the terms of the subordinated indenture and subordinated debt securities relating to subordination or otherwise as described in the prospectus supplement or free writing prospectus relating to a particular series of subordinated debt securities, the terms of the subordinated indenture and subordinated debt securities are identical in all material respects to the terms of the senior indenture and senior debt securities.

Additional or different subordination terms may be specified in the prospectus supplement applicable to a particular series.

Subordination. The indebtedness evidenced by the subordinated debt securities is subordinate to the prior payment in full of all of our senior indebtedness, as defined in the subordinated indenture. During the continuance beyond any applicable grace period of any default in the payment of principal, premium, interest or any other payment due on any of our senior indebtedness, we may not make any payment of principal of, or premium, if any, on or interest on the subordinated debt securities (except for certain sinking fund payments). In addition, upon any payment or distribution of our assets upon any dissolution, winding-up, liquidation or reorganization, the payment of the principal of, or premium, if any, on and interest on the subordinated debt securities will be subordinated to the extent provided in the subordinated indenture in right of payment to the prior payment in full of all our senior indebtedness. Because of this subordination, if we dissolve or otherwise liquidate, holders of our subordinated debt securities may receive less, ratably, than holders of our senior indebtedness. The subordination provisions do not prevent the occurrence of an event of default under the subordinated indenture.

Governing Law

The indentures and the debt securities will be governed by and construed in accordance with the internal laws of the State of New York.

Ranking of Debt Securities

The senior debt securities will rank equally in right of payment to all our other senior unsecured debt. The subordinated debt securities will be subordinate and junior in priority of payment to certain of our other indebtedness (including senior debt securities) to the extent described in a prospectus supplement or free writing prospectus.

DESCRIPTION OF WARRANTS

The following description, together with the additional information we include in any applicable prospectus supplements or free writing prospectuses that we may authorize to be distributed to purchasers, summarizes the material terms and provisions of the warrants that we may offer under this prospectus. Warrants may be offered independently or together with common stock, preferred stock and/or debt securities offered by any prospectus supplement or free writing prospectus, and may be attached to or separate from those securities. While the terms we have summarized below will generally apply to any future warrants we may offer under this prospectus, we will describe the particular terms of any warrants that we may offer in more detail in the applicable prospectus supplement or free writing prospectus. The terms of any warrants we offer under a prospectus supplement or free writing prospectus may differ from the general terms we describe below.

We will file as exhibits to the registration statement of which this prospectus is a part, or will incorporate by reference from reports that we file with the SEC, the form of warrant agreement, including a form of warrant certificate, that describes the terms of the particular series of warrants we are offering before the issuance of the related series of warrants. The following summaries of material provisions of the warrants and the warrant agreements are subject to, and qualified in their entirety by reference to, all the provisions of the warrant agreement and warrant certificate applicable to the particular series of warrants that we may offer under this prospectus. We urge you to read the applicable prospectus supplements related to the particular series of warrants that we may offer under this prospectus, as well as any related free writing prospectuses, and the complete warrant agreements and warrant certificates that contain the terms of the warrants.

General

We will describe in the applicable prospectus supplement the terms of the series of warrants being offered. If warrants for the purchase of debt securities are offered, the prospectus supplement or free writing prospectus will describe the following terms, to the extent applicable:

- the offering price and the aggregate number of warrants offered;
- the currencies in which the warrants are being offered;
- the designation, aggregate principal amount, currencies, denominations and terms of the series of debt securities that can be purchased if a holder exercises a warrant;
- the designation and terms of any series of debt securities with which the warrants are being offered and the number of warrants offered with each such debt security;
- the date on and after which the holder of the warrants can transfer them separately from the related series of debt securities;
- the principal amount of the series of debt securities that can be purchased if a holder exercises a warrant and the price at which and currencies in which such principal amount may be purchased upon exercise;
- the terms of any rights to redeem or call the warrants;
- the date on which the right to exercise the warrants begins and the date on which such right expires;
- federal income tax consequences of holding or exercising the warrants; and
- any other specific terms, preferences, rights or limitations of, or restrictions on, the warrants.

Warrants for the purchase of debt securities will be in registered form only.

If warrants for the purchase of common stock or preferred stock are offered, the prospectus supplement or free writing prospectus will describe the following terms, to the extent applicable:

- 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;

29

- if applicable, the date on and after which the warrants and the related securities will be separately transferable;
- 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 agreements 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 dates on which the right to exercise the warrants will commence and expire;
- the manner in which the warrant agreements and warrants may be modified;
- 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.

Before exercising their warrants, holders of warrants will not have any of the rights of holders of the securities purchasable upon such exercise, including the right to receive dividends, if any, or, payments upon our liquidation, dissolution or winding up or to exercise voting rights, if any.

Exercise of Warrants

Each warrant will entitle the holder to purchase the securities that we specify in the applicable prospectus supplement at the exercise price that we describe in the applicable prospectus supplement. Unless we otherwise specify in the applicable prospectus supplement, holders of the warrants may exercise the warrants at any time up to the specified time on the expiration date that we set forth in the applicable prospectus supplement. After the close of business on the expiration date, unexercised warrants will become void.

Holders of the warrants may exercise the warrants by delivering the warrant certificate representing the warrants to be exercised together with specified information, and paying the required amount to the warrant agent in immediately available funds, as provided in the applicable prospectus supplement. We will set forth on the reverse side of the warrant certificate and in the applicable prospectus supplement the information that the holder of the warrant will be required to deliver to the warrant agent.

Upon receipt of the required payment and the warrant certificate properly completed and duly executed at the corporate trust office of the warrant agent or any other office indicated in the applicable prospectus supplement, we will issue and deliver the securities purchasable upon such exercise. If fewer than all of the warrants represented by the warrant certificate are exercised, then we will issue a new warrant certificate for the remaining amount of warrants. If we so indicate in the applicable prospectus supplement, holders of the warrants may surrender securities as all or part of the exercise price for warrants.

Governing Law

Unless we provide otherwise in the applicable prospectus supplement, the warrants and warrant agreements will be governed by and construed in accordance with the laws of the State of New York.

Enforceability of Rights by Holders of Warrants

Each warrant agent will act solely as our agent under the applicable warrant agreement and will not assume any obligation or relationship of agency or trust with any holder of any warrant. A single bank or trust company may act as warrant agent for more than one issue of warrants. A warrant agent will have no duty or responsibility in case of

any default by us under the applicable warrant agreement or warrant, including any duty or responsibility to initiate any proceedings at law or otherwise, or to make any demand upon us. Any holder of a warrant may, without the consent of the related warrant agent or the holder of any other warrant, enforce by appropriate legal action its right to exercise, and receive the securities purchasable upon exercise of, its warrants.

DESCRIPTION OF UNITS

The following description, together with the additional information that we include in any applicable prospectus supplements or free writing prospectuses that we may authorize to be distributed to purchasers, summarizes the material terms and provisions of the units that we may offer under this prospectus. We may issue, in one more series, units consisting of common stock, preferred stock, debt securities and/or warrants for the purchase of common stock and/or preferred stock in any combination. While the terms we have summarized below will generally apply to any future series of units we may offer under this prospectus, we will describe the particular terms of any series of units that we may offer in more detail in the applicable prospectus supplement or free writing prospectus. The terms of any series of units we offer under a prospectus supplement or free writing prospectus may differ from the general of terms we described below.

We will file as exhibits to the registration statement of which this prospectus is a part, or will incorporate by reference from reports that we file with the SEC, the form of unit agreement that describes the terms of the series of units we are offering, and any supplemental agreements, before the issuance of the related series of units. The following summaries of material terms and provisions of the units are subject to, and qualified in their entirety by reference to, all the provisions of the unit agreement and any supplemental agreements applicable to a particular series of units. We urge you to read the applicable prospectus supplements related to the particular series of units that we may offer under this prospectus, as well as any related free writing prospectuses and the complete unit agreement and any supplemental agreements that contain the terms of the units.

General

Each unit 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.

We will describe in the applicable prospectus supplement the terms of the series of units being offered, including:

- 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;
- any provisions of the governing unit agreement that differ from those described below in this section; and
- any provisions for the issuance, payment, settlement, transfer or exchange of the units or 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 each unit and to any common stock, preferred stock or warrant included in each unit, respectively.

Issuance in Series

We may issue units in such amounts and in such numerous distinct series as we determine.

Enforceability of Rights by Holders of Units

Each unit agent will act solely as our agent under the applicable unit agreement and will not assume any obligation or relationship of agency or trust with any holder of any unit. A single bank or trust company may act as unit agent for more than one series of units. A unit agent will have no duty or responsibility in case of any default by us under the applicable unit agreement or unit, including any duty or responsibility to initiate any proceedings at law or otherwise,

or to make any demand upon us. Any holder of a unit may, without the consent of the related unit agent or the holder of any other unit, enforce by appropriate legal action its rights as holder under any security included in the unit.

Title

We, and any unit agent and any of their agents, may treat the registered holder of any unit certificate as an absolute owner of the units evidenced by that certificate for any purpose and as the person entitled to exercise the rights attaching to the units so requested, despite any notice to the contrary.

31



FORMS OF SECURITIES

General

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

Registered Global Securities

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

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

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

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

interest in a registered global security must rely on the procedures of the depositary for that registered global security and, if that person is not a participant, on the procedures of the participant through which the person owns its interest, to exercise any rights of a holder under the applicable indenture, unit agreement or warrant agreement. We understand that under existing industry practices, if we request any action of holders or if an owner of a beneficial interest in a registered global security desires to give or take any action that a holder is entitled to give or take under the applicable indenture, unit agreement or warrant agreement, the depositary for the registered global security would authorize the participants holding the relevant beneficial interests to give or take that action, and the participants would authorize beneficial owners owning through them to give or take that action or would otherwise act upon the instructions of beneficial owners holding through them.

Principal, premium, if any, on and interest payments on debt securities, and any payments to holders with respect to warrants, or units, represented by a registered global security registered in the name of a depositary or its nominee will be made to the depositary or its nominee, as the case may be, as the registered owner of the registered global security. None of us, the trustees, the warrant agents, the

unit agents or any other agent of ours, agent of the trustees or agent of the warrant agents or unit agents will have any responsibility or liability for any aspect of the records relating to payments made on account of beneficial ownership interests in the registered global security or for maintaining, supervising or reviewing any records relating to those beneficial ownership interests.

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

If the depository for any of the securities represented by a registered global security is at any time unwilling or unable to continue as depository or ceases to be a clearing agency registered under the Securities Exchange Act of 1934, as amended, or Exchange Act, and a successor depository registered as a clearing agency under the Exchange Act is not appointed by us within 90 days, we will issue securities in definitive form in exchange for the registered global security that had been held by the depository. Any securities issued in definitive form in exchange for a registered global security will be registered in the name or names that the depository gives to the relevant trustee, warrant agent, unit agent or other relevant agent of ours or theirs. It is expected that the depository's instructions will be based upon directions received by the depository from participants with respect to ownership of beneficial interests in the registered global security that had been held by the depository.

LEGAL MATTERS

The validity of the securities being offered by this prospectus will be passed upon by Goodwin Procter LLP, Boston, Massachusetts.

EXPERTS

The consolidated financial statements and the related financial statement schedule, incorporated in this prospectus by reference from BioAmber Inc.'s Annual Report on Form 10-K for the year ended December 31, 2015, have been audited by Deloitte LLP, an independent registered public accounting firm, as stated in their reports, which are incorporated herein by reference. Such financial statements and financial statement schedule have been so incorporated in reliance upon the reports of such firm given upon their authority as experts in accounting and auditing.