UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
Washington, D.C. 20549

FORM S-1
REGISTRATION STATEMENT
UNDER
THE SECURITIES ACT OF 1933

Amyris, Inc.
(Exact name of registrant as specified in its charter)

Delaware
(State or other jurisdiction of incorporation or organization)

2060
(Primary Standard Industrial Classification Code Number)

55-0856151
(IRS Employer Identification Number)

5885 Hollis Street, Suite 100
Emeryville, CA 94608
(510) 450-0761
(Address, including zip code, and telephone number, including area code, of registrant’s principal executive offices)

John Melo
President and Chief Executive Officer
5885 Hollis Street, Suite 100
Emeryville, CA 94608
(510) 450-0761
(Name, address, including zip code, and telephone number, including area code, of agent for service)

Please send copies of all correspondence to:
Gordon K. Davidson, Esq.
David Michaels, Esq.
Amanda L. Rose, Esq.
Horace Nash, Esq.
Fenwick & West LLP
801 California Street
Mountain View, California 94041
(650) 988-8500

Approximate date of commencement of proposed sale to the public: From time to time after the effectiveness of this registration statement.

If any of the securities being registered on this Form are to be offered on a delayed or continuous basis pursuant to Rule 415 under the Securities Act of 1933 check the following box. ☒

If this Form is filed to register additional securities for an offering pursuant to Rule 462(b) under the Securities Act, please check the following box and list the Securities Act registration statement number of the earlier effective registration statement for the same offering. ☐

If this Form is a post-effective amendment filed pursuant to Rule 462(c) under the Securities Act, check the following box and list the Securities Act registration statement number of the earlier effective registration statement for the same offering. ☐

If this Form is a post-effective amendment filed pursuant to Rule 462(d) under the Securities Act, check the following box and list the Securities Act registration statement number of the earlier effective registration statement for the same offering. ☐

If any of the securities being registered on this Form are to be offered on a delayed or continuous basis pursuant to Rule 415 under the Securities Act of 1933 check the following box. ☒

If this Form is filed to register additional securities for an offering pursuant to Rule 462(b) under the Securities Act, please check the following box and list the Securities Act registration statement number of the earlier effective registration statement for the same offering. ☐

If this Form is a post-effective amendment filed pursuant to Rule 462(c) under the Securities Act, check the following box and list the Securities Act registration statement number of the earlier effective registration statement for the same offering. ☐

If this Form is a post-effective amendment filed pursuant to Rule 462(d) under the Securities Act, check the following box and list the Securities Act registration statement number of the earlier effective registration statement for the same offering. ☐

If an emerging growth company, indicate by check mark whether the registrant has elected not to use the extended transition period for complying with any new or revised financial accounting standards provided pursuant to Section 7(a)(2)(B) of Securities Act. ☐

The registrant hereby amends this registration statement on such date or dates as may be necessary to delay its effective date until the registrant shall file a further amendment which specifically states that this registration statement shall thereafter become effective in accordance with Section 8(a) of the Securities Act of 1933, as amended, or until the registration statement shall become effective on such date as the Securities and Exchange Commission, acting pursuant to said Section 8(a), may determine.

<table>
<thead>
<tr>
<th>Title of each class of securities to be registered</th>
<th>Amount to be registered(1)</th>
<th>Proposed maximum offering price per unit(2)</th>
<th>Proposed maximum aggregate offering price(2)</th>
<th>Amount of registration fee</th>
</tr>
</thead>
<tbody>
<tr>
<td>Common Stock, $0.0001 par value per share</td>
<td>103,557,126</td>
<td>$3.83</td>
<td>$396,623,792.58</td>
<td>$51,481.77</td>
</tr>
</tbody>
</table>

(1) Pursuant to Rule 416 under the Securities Act of 1933, this Registration Statement shall also cover any additional shares of common stock which become issuable by reason of any stock dividend, stock split or other similar transaction effected without the receipt of consideration that results in an increase in the number of outstanding shares of the registrant’s common stock.

(2) In accordance with Rule 457(c) under the Securities Act of 1933, the aggregate offering price of the registrant’s common stock is estimated solely for the purpose of calculating the registration fees due for this filing. For the initial filing of this Registration Statement, this estimate was based on the average of the high and low sales price of the registrant’s common stock reported by The Nasdaq Global Select Market on November 4, 2019.

The registrant hereby amends this registration statement on such date or dates as may be necessary to delay its effective date until the registrant shall file a further amendment which specifically states that this registration statement shall thereafter become effective in accordance with Section 8(a) of the Securities Act of 1933, as amended, or until the registration statement shall become effective on such date as the Securities and Exchange Commission, acting pursuant to said Section 8(a), may determine.
AMYRIS, INC.

103,557,126 Shares of Common Stock

This prospectus relates to the registration for potential offer and sale from time to time of up to 103,557,126 shares of our common stock, par value $0.0001 per share (the “Shares”), by the selling stockholders identified in the “Selling Stockholders” section of this prospectus. The shares of common stock registered hereunder consist of (i) outstanding shares held by certain of the selling stockholders, (ii) shares issuable to certain of the selling stockholders upon conversion of shares of our Series D Convertible Preferred Stock, par value $0.0001 per share (the “Series D Preferred Stock”), issued to such selling stockholders and (iii) shares issuable to certain of the selling stockholders upon exercise of common stock purchase warrants issued to such selling stockholders (the “Warrants”). For more information regarding the Shares, see “Selling Stockholders” below.

The selling stockholders may sell the Shares directly to purchasers or through underwriters, broker-dealers or agents, who may receive compensation in the form of discounts, concessions or commissions. The selling stockholders may sell the Shares at any time at market prices prevailing at the time of sale or at privately negotiated prices. For more information regarding the selling stockholders and the sale of the Shares, see “Selling Stockholders” and “Plan of Distribution” below.

We are not selling any securities under this prospectus and will not receive any of the proceeds from the sale of the Shares by the selling stockholders. We will pay the expenses incurred in registering the Shares, including legal and accounting fees.

Our common stock is traded on The Nasdaq Global Select Market under the symbol “AMRS.” On November 11, 2019, the closing price of our common stock was $4.44 per share.

Investing in our securities involves risks. See “Risk Factors” commencing on page 4. You should carefully read this prospectus, the documents incorporated herein, and, if applicable, any prospectus supplement subsequently filed with respect to this prospectus, before making any investment decision.

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

The date of this prospectus is November 12, 2019
INFORMATION CONTAINED IN THIS PROSPECTUS

We have not authorized any dealer, agent or other person to give any information or to make any representation other than those contained or incorporated by reference in this prospectus and, if applicable, any accompanying prospectus supplement or any free writing prospectus. You must not rely upon any information or representation not contained or incorporated by reference in this prospectus or, if applicable, any accompanying prospectus supplement or any free writing prospectus. This prospectus and, if applicable, any accompanying prospectus supplement or any free writing prospectus, do not constitute an offer to sell or the solicitation of an offer to buy any securities other than the registered securities to which they relate, nor do this prospectus and, if applicable, any accompanying prospectus supplement or any free writing prospectus constitute an offer to sell or the solicitation of an offer to buy securities in any jurisdiction to any person to whom it is unlawful to make such offer or solicitation in such jurisdiction. You should not assume that the information contained in this prospectus and, if applicable, any accompanying prospectus supplement or any free writing prospectus, is accurate on any date subsequent to the date set forth on the front of the document or that any information we have incorporated by reference is correct on any date subsequent to the date of the document incorporated by reference, even though this prospectus and, if applicable, any accompanying prospectus supplement or any free writing prospectus, is delivered or securities are sold on a later date.

This prospectus may be supplemented from time to time by one or more prospectus supplements. Any such prospectus supplements may include additional information, such as additional risk factors or other special considerations applicable to us, our business or results of operations or our common stock, and may also update or change the information in this prospectus. If there is any inconsistency between the information in this prospectus and any prospectus supplement, you should rely on the information in the prospectus supplement.
PROSPECTUS SUMMARY

This summary highlights information contained elsewhere in this prospectus and in the documents incorporated by reference herein. Because it is a summary, it does not contain all of the information that you should consider in making your investment decision. Before investing in our securities, you should carefully read this entire prospectus and the documents incorporated by reference herein, including our consolidated financial statements and the related notes and the information set forth under the section “Risk Factors”. Some of the statements in this prospectus and the documents incorporated by reference herein constitute forward-looking statements that involve risks and uncertainties. See information set forth under the section “Forward-Looking Statements”.

About This Prospectus

This prospectus is part of a registration statement that we have filed with the Securities and Exchange Commission (the “Commission”) to register 103,557,126 shares of our common stock (the “Shares”). The shares of common stock registered hereunder consist of (i) outstanding shares held by the selling stockholders, (ii) shares issuable upon conversion of shares of the Series D Preferred Stock and (iii) shares issuable upon exercise of the Warrants. The Shares are being registered for resale or other disposition by the selling stockholders. We will not receive any proceeds from the sale or other disposition of the Shares registered hereunder, or interests therein.

About Amyris, Inc.

Overview

We are a leading industrial biotechnology company that applies its technology platform to engineer, manufacture and sell high performance, natural, sustainably-sourced products into the Health & Wellness, Clean Beauty, and Flavor & Fragrance markets. Our proven technology platform enables us to rapidly engineer microbes and use them as catalysts to metabolize renewable, plant-sourced sugars into large volume, high-value ingredients. Our biotechnology platform and industrial fermentation process replace existing complex and expensive manufacturing processes. We have successfully used our technology to develop and produce eight distinct molecules at commercial volumes, leading to more than 15 commercial ingredients used by thousands of leading global brands.

We believe that industrial biotechnology represents a third industrial revolution, bringing together biology and engineering to generate new, more sustainable materials to meet the growing global demand for bio-based replacements for petroleum-based and traditional animal- or plant-derived ingredients. We continue to build demand for our current portfolio of products through an extensive sales network provided by our collaboration partners that represent the leading companies in the world for our target market sectors. We also have a small group of direct sales and distributors who support our Clean Beauty market. Via our partnership model, our partners invest in the development of each molecule to bring it from the lab to commercial scale and use their extensive sales forces to sell our ingredients and formulations to their customers as part of their core business. We capture long-term revenue both through the production and sale of the molecule to our partners and through royalty revenues from our partners’ product sales to their customers.

Background

We were founded in 2003 in the San Francisco Bay area by a group of scientists from the University of California, Berkeley. Our first major milestone came in 2005 when, through a grant from the Bill & Melinda Gates Foundation, we developed technology capable of creating microbial strains that produce artemisinic acid, which is a precursor of artemisinin, an effective anti-malarial drug. In 2008, we granted royalty-free licenses to allow Sanofi S.A. to produce artemisinic acid using our technology. Building on our success with artemisinic acid, we...
In 2007, we began applying our technology platform to develop, manufacture, and sell sustainable alternatives to a broad range of markets. We focused our initial development efforts primarily on the production of Biofene®, our brand of renewable farnesene, a long-chain, branched hydrocarbon molecule that we manufacture through fermentation using engineered microbes. Our farnesene derivatives are sold in thousands of products as nutraceuticals, skincare products, fragrances, solvents, polymers, and lubricant ingredients. The commercialization of farnesene pushed us to create a more cost-efficient, faster and accurate development process in the lab and drive manufacturing costs down. This investment has enabled our technology platform to rapidly develop microbial strains and commercialize target molecules. In 2014, we began manufacturing additional molecules for the Flavor & Fragrance industry. In 2015, we began investing to expand our capabilities to other small molecule chemical classes beyond terpenes, which comprised our initial research efforts, via our collaboration with the Defense Advanced Research Projects Agency (DARPA). In 2016 we expanded into the production of proteins.

Our Platform

We have invested over $600 million in infrastructure and technology to create microbes that produce molecules from sugar or other feedstocks at commercial scale. This platform has been used to design, build, optimize and upscale strains producing eight distinct molecules at commercial volumes, leading to more than 15 commercial ingredients used by thousands of leading global brands. Our time to market for molecules has decreased from seven years to potentially less than a year, mainly due to our ability to leverage the technology platform we have built.

Our technology platform has been in active use since 2007 and has been integrated with our commercial production since 2011, creating an organism development process that we believe makes us an industry leader in the successful scale-up and commercialization of biotech-produced ingredients. The key performance characteristics of our platform that we believe differentiate us include our proprietary computational tools, strain construction tools, screening and analytics tools, and advanced lab automation and data integration. Full integration of the platform with our large-scale manufacturing capability enables us to engineer precisely with the end specification and commercial production requirements guiding our developments. Our state-of-the-art infrastructure includes industry-leading strain engineering and lab automation located in Emeryville, California, pilot scale production facilities in Emeryville, California and Campinas, Brazil, a demonstration-scale facility in Campinas, Brazil and a commercial-scale production facility in Leland, North Carolina, which is owned and operated by our Aprinnova joint venture to convert our Biofene into squalane and other final products.

We are able to use a wide variety of feedstocks for production, but have focused on accessing Brazilian sugarcane for our large-scale production because of its renewability, low cost and relative price stability. We have also successfully used other feedstocks such as sugar beets, corn dextrose, sweet sorghum and cellulosic sugars at various manufacturing facilities.

Strategy and Business Model

Several years ago, we made the strategic decision to transition our business model from developing and commercializing molecules in low margin commodity markets to higher margin specialty markets. We began the transition by commercializing and supplying farnesene-derived squalane as a cosmetic ingredient sold to formulators and distributors. We then entered into collaboration and supply agreements for the development and commercialization of molecules within the Flavor & Fragrance and Clean Beauty markets where we utilize our strain generation technology to develop molecules that meet the customer’s rigorous specifications.

During this transition, we solidified the business model of partnering with our customers to create sustainable, high performing, low-cost molecules that replace an ingredient in their supply chain, commercially...
scale and manufacture those molecules, and share in the profits earned by our customers once our customers sell their products into these specialty markets. These three steps constitute our collaboration revenues, renewable product revenues, and royalty revenues.

**Corporate Information**

We were originally incorporated in California in 2003 under the name Amyris Biotechnologies, Inc. and then reincorporated in Delaware in 2010 and changed our name to Amyris, Inc. Our principal executive offices are located at 5885 Hollis Street, Suite 100, Emeryville, California 94608, and our telephone number is (510) 450-0761. Our common stock is listed on The Nasdaq Global Select Market under the symbol “AMRS.” Our website address is www.amyris.com. The information contained in or accessible through our website or contained on other websites is not a part of, and not incorporated into, this prospectus.

The mark “Amyris”, the Amyris logo, and Biofene are trademarks or registered trademarks of Amyris, Inc. and all product names are our common law trademarks. This prospectus also contains trademarks and trade names of other businesses that are the property of their respective holders. Solely for convenience, the trademarks and tradenames referred to in this prospectus appear without the ® and ™ symbols, but those references are not intended to indicate, in any way, that we will not assert, to the fullest extent under applicable law, our rights, or the right of the applicable licensor to these trademarks and tradenames.
RISK FACTORS

Investing in our common stock involves a high degree of risk. Prior to making a decision about investing in our securities, you should carefully consider the risks and uncertainties described below, together with all of the other information set forth in this prospectus or incorporated herein by reference, including the consolidated financial statements and related notes, and the risks and uncertainties discussed under “Risk Factors” in Part I, Item 1A of our Annual Report on Form 10-K for the year ended December 31, 2018 and in Part II, Item 1A of our Quarterly Reports on Form 10-Q for the quarters ended March 31, 2019, June 30, 2019 and September 30, 2019, which are incorporated by reference herein in their entirety. If any of the risks described herein or therein actually occur, our business, financial condition and results of operations could suffer. In these circumstances, the market price of our common stock could decline and you may lose all or part of your investment in our common stock.

Additional risks and uncertainties beyond those set forth in this prospectus or in our reports filed with the Commission and not presently known to us or that we currently deem immaterial may also affect our operations. Any risks and uncertainties, whether set forth in this prospectus or in our reports filed with the Commission or otherwise, could cause our business, financial condition, results of operations and future prospects to be materially and adversely harmed. The trading price of our securities could decline due to any of these risks and uncertainties, and, as a result, you may lose all or part of your investment.

Our stock price may be volatile.

The market price of our common stock has been, and we expect it to continue to be, subject to significant volatility, and it has declined significantly from our initial public offering price. As of November 11, 2019, the reported closing price of our common stock on The Nasdaq Global Select Market (“Nasdaq”) was $4.44 per share. Market prices for securities of early stage companies have historically been particularly volatile. Such fluctuations could be in response to, among other things, the factors described in this “Risk Factors” section, or other factors, some of which are beyond our control, such as:

- fluctuations in our financial results or outlook or those of companies perceived to be similar to us;
- changes in estimates of our financial results or recommendations by securities analysts;
- changes in market valuations of similar companies;
- changes in the prices of commodities associated with our business such as sugar and petroleum or changes in the prices of commodities that some of our products may replace, such as oil and other petroleum sourced products;
- changes in our capital structure, such as future issuances of securities or the incurrence of debt;
- announcements by us or our competitors of significant contracts, acquisitions or strategic partnerships;
- regulatory developments in the United States, Brazil, and/or other foreign countries;
- litigation involving us, our general industry or both;
- additions or departures of key personnel;
- investors’ general perception of us; and
- changes in general economic, industry and market conditions.

Furthermore, stock markets have experienced price and volume fluctuations that have affected, and continue to affect, the market prices of equity securities of many companies. These fluctuations often have been unrelated or disproportionate to the operating performance of those companies. These broad market fluctuations, as well as general economic, political and market conditions, such as recessions, interest rate changes and international currency fluctuations, may negatively affect the market price of our common stock.
In the past, many companies that have experienced volatility and sustained declines in the market price of their stock have become subject to securities class action and derivative action litigation. We were involved in two such lawsuits which were dismissed in 2014, were involved in five such lawsuits that were dismissed in September 2017, July 2018 and September 2018, respectively, are currently involved in three such lawsuits, and we may be the target of this type of litigation in the future. Securities litigation against us could result in substantial costs and divert our management’s attention from other business concerns, which could seriously harm our business.

If our common stock is delisted from Nasdaq, our business, financial condition, results of operations and stock price could be adversely affected, and the liquidity of our stock and our ability to obtain financing could be impaired.

On April 3, 2019, we received a letter from Nasdaq notifying us that we were not in compliance with the requirement of Nasdaq Listing Rule 5250(c)(1) for continued listing on Nasdaq as a result of our failure to timely file our Annual Report on Form 10-K for the year ended December 31, 2018 (the “2018 10-K”). In accordance with the notice, we were required to submit to Nasdaq a plan to regain compliance with Nasdaq’s requirements for continued listing within 60 calendar days of the date of the notice, or by June 3, 2019. On May 14 and August 16, 2019, we received further letters from Nasdaq notifying us that we were not in compliance with the requirement of Nasdaq Listing Rule 5250(c)(1) for continued listing on Nasdaq as a result of our failure to timely file our Quarterly Report on Form 10-Q for the fiscal quarter ended March 31, 2019 and Quarterly Report on Form 10-Q for the fiscal quarter ended June 30, 2019 (the “Delinquent Reports”), respectively, as well as our continued delinquency in filing our 2018 10-K. On June 3, 2019, we submitted to Nasdaq a plan to regain compliance with Nasdaq’s requirements for continued listing. On June 12, 2019, Nasdaq granted us an exception until August 15, 2019 to regain compliance with Nasdaq’s requirements for continued listing and on July 25, 2019, Nasdaq extended the exception to September 30, 2019. On October 1, 2019, we received a determination letter from Nasdaq notifying us that, due to the fact that we had not filed the Delinquent Reports by September 30, 2019, our common stock was subject to suspension of trading and delisting from Nasdaq at the opening of business on October 10, 2019. We filed the 2018 10-K with the Commission on October 1, 2019 and filed the Delinquent Reports with the Commission on October 7, 2019, and subsequently received a letter from Nasdaq notifying us that we had regained compliance with Nasdaq’s requirements for continued listing and that our common stock was no longer subject to suspension of trading or delisting from Nasdaq. There can be no assurance, however, that we will maintain compliance with Nasdaq’s rules for continued listing, including the requirements that we timely file our periodic reports with the Commission and maintain a stock price of at least $1.00 per share, or that our common stock will remain listed on Nasdaq.

Any delisting of our common stock from Nasdaq could adversely affect our ability to attract new investors, decrease the liquidity of our outstanding shares of common stock, reduce our flexibility to raise additional capital, reduce the price at which our common stock trades, and increase the transaction costs inherent in trading such shares with overall negative effects for our stockholders. In addition, the delisting of our common stock could deter broker-dealers from making a market in or otherwise seeking or generating interest in our common stock, and might deter certain institutions and persons from investing in our securities at all. Furthermore, the delisting of our common stock from Nasdaq would constitute a breach under certain of our financing agreements, including agreements governing our outstanding convertible indebtedness, which could result in an acceleration of such indebtedness. If such indebtedness is accelerated, it would generally also constitute an event of default under our other outstanding indebtedness, permitting acceleration of such other outstanding indebtedness as well. For these reasons and others, the delisting of our common stock from Nasdaq could materially adversely affect our business, financial condition and results of operations.

The concentration of our capital stock ownership with insiders will limit the ability of other stockholders to influence corporate matters and presents risks related to the operations of our significant stockholders.

As of October 31, 2019, significant stockholders held an aggregate total of 45.5% of the Company’s total common shares outstanding, as follows: Foris Ventures, LLC (“Foris”) (17.6%), Koninklijke DSM N.V.
Furthermore, each of these parties holds convertible preferred stock, convertible promissory notes and/or warrants, pursuant to which they may acquire additional shares of our common stock and thereby increase their ownership interest in our company. Additionally, each of DSM, Total and Vivo have the right to designate one or more directors to serve on our Board of Directors pursuant to agreements between us and such stockholders, and Foris is indirectly owned by John Doerr, one of our current directors. This significant concentration of share ownership may adversely affect the trading price of our common stock because investors often perceive disadvantages in owning stock in companies with stockholders with significant interests. Also, these stockholders, acting together, may be able to control or significantly influence our management and affairs and matters requiring stockholder approval, including the election of directors and the approval of significant corporate transactions, such as mergers, consolidations or the sale of all or substantially all of our assets, and may not act in the best interests of our other stockholders. Consequently, this concentration of ownership may have the effect of delaying or preventing a change of control, or a change in our management or Board of Directors, or discouraging a potential acquirer from making a tender offer or otherwise attempting to obtain control of our company, even if such actions would benefit our other stockholders.

In addition, certain of our significant stockholders are also our commercial partners and have various rights in connection with their security ownership in us. These stockholders may have interests that are different from those of our other stockholders, including with respect to our company’s commercial transactions. While we have a related-party transactions policy that requires certain approvals of any transaction between our company and a significant stockholder or its affiliates, there can be no assurance that our significant stockholders will act in the best interests of our other stockholders, which could harm our results of operations and cause our stock price to decline.

The market price of our common stock could be negatively affected by future sales of our common stock.

If our existing stockholders, particularly our largest stockholders, our directors, their affiliates, or our executive officers, sell a substantial number of shares of our common stock in the public market, the market price of our common stock could decrease significantly. The perception in the public market that these stockholders might sell our common stock could also depress the market price of our common stock and could impair our future ability to obtain capital, especially through an offering of equity securities.

We have in place, or have agreed to file, registration statements for the resale of certain shares of our common stock held by, or issuable to, certain of our largest stockholders, including the registration statement of which this prospectus forms a part. All of our common stock sold pursuant to an offering covered by such registration statements will be freely transferable. In addition, shares of our common stock issued or issuable under our equity incentive plans have been registered on Form S-8 registration statements and may be freely sold in the public market upon issuance, except for shares held by affiliates who have certain restrictions on their ability to sell.

If securities or industry analysts do not publish or cease publishing research or reports about us, our business or our market, or if they change their recommendations regarding our stock adversely, our stock price and trading volume could decline.

The trading market for our common stock will be influenced by the research and reports that industry or securities analysts may publish about us, our business, our market or our competitors. If any of the analysts who cover us change their recommendation regarding our stock adversely, or provide more favorable relative recommendations about our competitors, our stock price would likely decline. If any analyst who may cover us were to cease coverage of our company or fail to regularly publish reports on us, we could lose visibility in the financial markets, which in turn could cause our stock price or trading volume to decline.

We do not expect to declare any dividends in the foreseeable future.

We do not anticipate declaring any cash dividends to holders of our common stock in the foreseeable future. In addition, certain of our equipment leases and credit facilities currently restrict our ability to pay dividends.
Consequently, investors may need to rely on sales of their shares of our common stock after price appreciation, which may never occur, as the only way to realize any future gains on their investment. Investors seeking cash dividends should not purchase our common stock.

Anti-takeover provisions contained in our Certificate of Incorporation and Bylaws, as well as provisions of Delaware law, could impair a takeover attempt.

Our Certificate of Incorporation and Bylaws contain provisions that could delay or prevent a change in control of our company. These provisions could also make it more difficult for stockholders to nominate directors and take other corporate actions. These provisions include:

- a staggered Board of Directors;
- authorizing the Board of Directors to issue, without stockholder approval, preferred stock with rights senior to those of our common stock;
- authorizing the Board of Directors to amend our Bylaws, to increase the number of directors and to fill board vacancies until the end of the term of the applicable class of directors;
- prohibiting stockholder action by written consent;
- limiting the liability of, and providing indemnification to, our directors and officers;
- eliminating the ability of our stockholders to call special meetings; and
- requiring advance notification of stockholder nominations and proposals.

Section 203 of the Delaware General Corporation Law prohibits, subject to some exceptions, “business combinations” between a Delaware corporation and an “interested stockholder,” which is generally defined as a stockholder who becomes a beneficial owner of 15% or more of a Delaware corporation’s voting stock, for a three-year period following the date that the stockholder became an interested stockholder. We have agreed to opt out of Section 203 through our Certificate of Incorporation, but our Certificate of Incorporation contains substantially similar protections to our company and stockholders as those afforded under Section 203, except that we have agreed with Total that it and its affiliates will not be deemed to be “interested stockholders” under such protections.

These and other provisions in our Certificate of Incorporation and our Bylaws could discourage potential takeover attempts, reduce the price that investors are willing to pay in the future for shares of our common stock and result in the market price of our common stock being lower than it would be without these provisions.
FORWARD-LOOKING STATEMENTS

This prospectus, any prospectus supplement and the other documents we have filed with the Commission that are incorporated herein by reference contain forward-looking statements within the meaning of the Private Securities Litigation Reform Act of 1995 that involve risks and uncertainties, as well as assumptions that, if they never materialize or prove incorrect, could cause our results to differ materially from those expressed or implied by such forward-looking statements. These risks and uncertainties, including those discussed under the heading “Risk Factors” above, include our liquidity and ability to fund operating and capital expenses, potential delays or failures in development, production and commercialization of products, and our reliance on third parties.

All statements other than statements of historical fact are statements that could be deemed to be forward-looking statements, including any projections of financing needs, revenue, expenses, earnings or losses from operations, or other financial items; any statements of the plans, strategies and objectives of management for future operations; any statements concerning product research, development and commercialization plans and timelines; any statements regarding expected production capacities, volumes and costs; any statements regarding anticipated benefits of our products and expectations for commercial relationships; any other statements of expectation or belief; and any statements of assumptions underlying any of the foregoing. The words “believe,” “anticipate,” “expect,” “estimate,” “intend,” “plan,” “project,” “will be,” “will continue,” “will result,” “seek,” “could,” “may,” “might,” or any variations of such words or other words with similar meanings generally identify forward-looking statements.

Given these uncertainties, you should not place undue reliance on these forward-looking statements. You should read this prospectus, any supplements to this prospectus and the documents that we incorporate by reference in this prospectus with the understanding that our actual future results may be materially different from what we expect.

The forward-looking statements in this prospectus and in any prospectus supplement or other document we have filed with the Commission and incorporated herein represent our views as of the date thereof. We anticipate that subsequent events and developments will cause our views to change. However, while we may elect to update these forward-looking statements at some point in the future or to conform these statements to actual results or revised expectations, we have no current intention of doing so except to the extent required by applicable law. You should, therefore, not rely on these forward-looking statements as representing our views as of any date subsequent to the date of this prospectus or such prospectus supplement or other document.

USE OF PROCEEDS

The proceeds from the sale of the Shares offered pursuant to this prospectus are solely for the accounts of the selling stockholders. Accordingly, we will not receive any of the proceeds from the sale of the Shares offered by this prospectus. See “Selling Stockholders” and “Plan of Distribution” below.

DETERMINATION OF OFFERING PRICE

The selling stockholders may offer and sell the shares of common stock covered by this prospectus at prevailing market prices or privately negotiated prices. See “Plan of Distribution” below.

8
SELLING STOCKHOLDERS

The shares of our common stock being offered by the selling stockholders under this prospectus (the “Shares”) consist of (i) outstanding shares held by certain of the selling stockholders, (ii) shares issuable to certain of the selling stockholders upon conversion of shares of our Series D Convertible Preferred Stock, par value $0.0001 per share (the “Series D Preferred Stock”), issued to such selling stockholders and (iii) shares issuable to certain of the selling stockholders upon exercise of common stock purchase warrants issued to such selling stockholders (the “Warrants”). We have agreements in place with certain of the selling stockholders in which we have agreed to file a registration statement with the Commission covering the resale of shares of our capital stock, and this registration statement has been filed pursuant to those agreements.

The table below lists the selling stockholders and other information regarding their beneficial ownership (as determined under Section 13(d) of the Securities Exchange Act of 1934, as amended (the “Exchange Act”), and the rules and regulations thereunder) of our common stock as of October 31, 2019. Under Section 13(d) of the Exchange Act, beneficial ownership generally includes voting or investment power with respect to securities, including any securities that grant the holder the right to acquire shares of common stock within 60 days of the date of determination. These shares are deemed to be outstanding for the purpose of computing the percentage ownership of the person holding those securities, but they are not treated as outstanding for the purpose of computing the percentage ownership of any other person. The percentage ownership data is based on 105,502,887 shares of our common stock issued and outstanding as of October 31, 2019 (as reflected in the records of our stock transfer agent).

The conversion and exercise terms of the Series D Preferred Stock and Warrants, respectively, are as follows:

Series D Preferred Stock

Each share of Series D Preferred Stock has a stated value of $1,000 and, subject to the Series D Beneficial Ownership Limitation (as defined below), is convertible at any time, at the option of the holder, into shares of common stock at a conversion price of $4.26 per share (the “Conversion Rate”). The Conversion Rate is subject to adjustment in the event of any dividends or distributions of our common stock, or any stock split, reverse stock split, recapitalization, reorganization or similar transaction.

Notwithstanding the foregoing, the holders will not have the right to convert any Series D Preferred Stock if the holder, together with its affiliates, would beneficially own in excess of 9.99% of the number of shares of our common stock outstanding immediately after giving effect to the issuance of shares issuable upon conversion of such Series D Preferred Stock (the “Series D Beneficial Ownership Limitation”). Any holder may waive the Series D Beneficial Ownership Limitation upon notice to us, provided that such waiver (i) will not be effective until the 61st day after such notice is delivered to us and (ii) will not be effective to the extent such waiver would require the prior approval of our stockholders, unless such approval has been obtained.

Warrants

On July 29, 2015, we issued a warrant to Foris to purchase up to 64,103 shares of our common stock at a price of $0.15 per share. The exercise of the warrant was subject to stockholder approval, which was obtained on September 17, 2015. The exercise price of the warrant may, at the election of the holder, be paid in cash or on a net exercise basis. The warrant expires on July 29, 2020.

On February 12, 2016, we issued a warrant to Foris to purchase up to 152,381 shares of our common stock at a price of $0.15 per share. The exercise of the warrant was subject to stockholder approval, which was obtained on May 17, 2016. The exercise price of the warrant may, at the election of the holder, be paid in cash or on a net exercise basis. The warrant expires on February 12, 2021.
On May 11, 2017, we issued to DSM (i) a warrant to purchase up to 3,968,116 shares of our common stock, which is currently exercisable at a price of $2.87 per share, the exercise price of which is subject to full-ratchet anti-dilution protection for any issuance by us of equity or equity-linked securities during the three-year period following the issuance of the warrant (the “May 2017 DSM Dilution Period”) at a per share price (including any conversion or exercise price, if applicable) less than the then-current exercise price of the warrant, subject to certain exceptions and (ii) a warrant (the “May 2017 DSM Dilution Warrant”), with an exercise price of $0.0015 per share, to purchase up to a number of shares of common stock sufficient to provide DSM International B.V. with full-ratchet anti-dilution protection for any issuance by us of equity or equity-linked securities during the May 2017 DSM Dilution Period at a per share price (including any conversion or exercise price, if applicable) less than $6.30 per share, subject to certain exceptions. As of October 31, 2019, the May 2017 DSM Dilution Warrant was exercisable for 3,028,983 shares of common stock. The exercise price of these warrants may, at the election of the holder, be paid in cash or on a net exercise basis. The exercise of these warrants was subject to stockholder approval, which was obtained on July 7, 2017. The warrants expire on July 10, 2022.

On August 7, 2017, we issued to DSM (i) a warrant to purchase up to 3,968,116 shares of our common stock, which is currently exercisable at a price of $2.87 per share, the exercise price of which is subject to full-ratchet anti-dilution protection for any issuance by us of equity or equity-linked securities during the three-year period following the issuance of the warrant (the “August 2017 DSM Dilution Period”) at a per share price (including any conversion or exercise price, if applicable) less than the then-current exercise price of the warrant, subject to certain exceptions and (ii) a warrant (the “August 2017 DSM Dilution Warrant”), with an exercise price of $0.0001 per share, to purchase up to a number of shares of common stock sufficient to provide DSM International B.V. with full-ratchet anti-dilution protection for any issuance by us of equity or equity-linked securities during the August 2017 DSM Dilution Period at a per share price (including any conversion or exercise price, if applicable) less than $6.30 per share, subject to certain exceptions and subject to a price floor of $0.10 per share. As of October 31, 2019, the August 2017 DSM Dilution Warrant was exercisable for 3,028,983 shares of common stock. The exercise price of these warrants may, at the election of the holder, be paid in cash or on a net exercise basis. The effectiveness of the anti-dilution adjustment provisions of these warrants and the exercise of the August 2017 DSM Dilution Warrant was subject to stockholder approval, which was obtained on May 22, 2018. The warrants expire on May 23, 2023.

On August 17, 2018, we issued a warrant to Foris to purchase up to 4,877,386 shares of our common stock, which is currently exercisable at a price of $2.87 per share. The warrant only permits net exercise to the extent that there is not an effective registration statement covering the resale of the shares of common stock underlying the warrant. The warrant expires on May 17, 2020.

On August 17, 2018 and August 20, 2018, we issued four separate warrants to affiliates of Vivo to purchase up to an aggregate of 7,219,778 shares of our common stock at a price of $7.52 per share. The warrants only permit net exercise to the extent that there is not an effective registration statement covering the resale of the shares of common stock underlying the warrants. The exercise of the warrants is subject to a 9.99% beneficial ownership limitation, which may be waived by Vivo upon 61 days’ prior notice. The warrants expire on May 17, 2020 and May 20, 2020, respectively.

On April 16, 2019, we issued a warrant to Foris to purchase up to 5,424,804 shares of our common stock at a price of $2.87 per share. The warrant only permits net exercise to the extent that there is not an effective registration statement covering the resale of the shares of common stock underlying the warrant. The exercise of the warrant is subject to a 19.99% beneficial ownership limitation, unless we have obtained stockholder approval to exceed such limit. The warrant expires on April 16, 2021.

On April 26, 2019, we issued a warrant to Foris to purchase up to 3,983,230 shares of our common stock, which is currently exercisable at a price of $3.90 per share. The warrant only permits net exercise to the extent that there is not an effective registration statement covering the resale of the shares of common stock underlying the warrant. The exercise of the warrant is subject to a 19.99% beneficial ownership limitation, unless we have obtained stockholder approval to exceed such limit. The warrant expires on April 26, 2021.
On April 29, 2019, we issued two separate warrants to affiliates of Vivo to purchase up to an aggregate of 1,212,787 shares of our common stock at a price of $4.76 per share. The warrants only permit net exercise to the extent that there is not an effective registration statement covering the resale of the shares of common stock underlying the warrants. The exercise of the warrants is subject to a 19.99% beneficial ownership limitation, unless we have obtained stockholder approval to exceed such limit. The warrants expire on April 29, 2021.

On April 26, 2019, April 29, 2019 and May 3, 2019, we issued seven separate warrants to certain selling stockholders to purchase up to an aggregate of 2,888,753 shares of our common stock at a price of $5.02 per share. The warrants only permit net exercise to the extent that there is not an effective registration statement covering the resale of the shares of common stock underlying the warrants. The exercise of the warrants is subject to a 19.99% beneficial ownership limitation, unless we have obtained stockholder approval to exceed such limit. The warrants expire on the second anniversary of their respective dates of issuance.

On May 10, 2019, we issued two separate warrants to certain selling stockholders to purchase up to an aggregate of 1,391,603 shares of our common stock at a price of $5.02 per share. The warrants only permit net exercise to the extent that there is not an effective registration statement covering the resale of the shares of common stock underlying the warrants. The exercise of the warrants is subject to a 4.99% beneficial ownership limitation. The warrants expire on May 10, 2021.

On May 14, 2019, we issued a warrant to Foris to purchase up to 352,638 shares of our common stock, which is currently exercisable at a price of $3.90 per share. The warrant only permits net exercise to the extent that there is not an effective registration statement covering the resale of the shares of common stock underlying the warrant. The exercise of the warrant is subject to stockholder approval, which we are seeking at our 2019 annual meeting of stockholders. The warrant expires on May 14, 2021.

On June 24, 2019, we issued a warrant to B. Riley FBR, Inc. to purchase up to 181,818 shares of our common stock at a price of $5.12 per share. The warrant only permits net exercise to the extent that there is not an effective registration statement covering the resale of the shares of common stock underlying the warrant. The exercise of the warrant is subject to a 4.99% beneficial ownership limitation. The warrant expires on June 24, 2021.

On July 8, 2019, we issued a warrant to Wolverine Flagship Fund Trading Limited to purchase up to 1,080,000 shares of our common stock at a price of $2.87 per share. The warrant only permits net exercise to the extent that there is not an effective registration statement covering the resale of the shares of common stock underlying the warrant. The exercise of the warrant is subject to a 4.99% beneficial ownership limitation. The warrant expires on July 8, 2021.

On July 24, 2019, we issued a warrant to CVI Investments, Inc. to purchase up to 2,000,000 shares of our common stock at a price of $2.87 per share. The warrant only permits net exercise to the extent that there is not an effective registration statement covering the resale of the shares of common stock underlying the warrant. The exercise of the warrant is subject to a 4.99% beneficial ownership limitation. The warrant expires on May 15, 2021.

On August 14, 2019, we issued a warrant to Naxyris S.A. to purchase up to 2,000,000 shares of our common stock at a price of $2.87 per share. The warrant expires on August 14, 2021.

On August 14, 2019, we issued a warrant to Foris to purchase up to 1,438,829 shares of our common stock at a price of $2.87 per share. The warrant only permits net exercise to the extent that there is not an effective registration statement covering the resale of the shares of common stock underlying the warrant. The exercise of the warrant is subject to a 19.99% beneficial ownership limitation, unless we have obtained stockholder approval to exceed such limit. The warrant expires on August 14, 2021.
On August 28, 2019, we issued a warrant to Foris to purchase up to 4,871,795 shares of our common stock at a price of $3.90 per share. The warrant only permits net exercise to the extent that there is not an effective registration statement covering the resale of the shares of common stock underlying the warrant. The exercise of the warrant is subject to a 19.99% beneficial ownership limitation, unless we have obtained stockholder approval to exceed such limit. The warrant expires on August 28, 2021.

On September 10, 2019, we issued three separate warrants to certain selling stockholders to purchase up to an aggregate of 3,205,128 shares of our common stock at a price of $3.90 per share. The warrants only permit net exercise to the extent that there is not an effective registration statement covering the resale of the shares of common stock underlying the warrants. The exercise of the warrants is subject to a 9.99% beneficial ownership limitation. The warrants expire on September 10, 2021.

On October 11, 2019, we issued a warrant to Foris to purchase up to 2,000,000 shares of our common stock at a price of $2.87 per share. The warrant only permits net exercise to the extent that there is not an effective registration statement covering the resale of the shares of common stock underlying the warrant. The exercise of the warrant is subject to a 19.99% beneficial ownership limitation, unless we have obtained stockholder approval to exceed such limit. The warrant expires on October 11, 2021.

On October 28, 2019, we issued a warrant to Naxyris S.A. to purchase up to 2,000,000 shares of our common stock at a price of $3.87 per share. The warrant expires on October 28, 2021.

We have prepared the table below based on information furnished to us by or on behalf of the selling stockholders. The second column of the table lists the number of shares of common stock beneficially owned by the selling stockholders as of October 31, 2019, taking into account any beneficial ownership limitation contained in the Series D Preferred Stock, any Warrant or any other contract between us and such selling stockholder (collectively, the “Ownership Limitations”). The third column of the table lists the shares of common stock being offered under this prospectus by the selling stockholders or by those persons or entities to whom they transfer, donate, devise, pledge or distribute their Shares or by other successors in interest, and does not take into account the Ownership Limitations.

Because, among other things, the conversion of the Series D Preferred Stock and the exercise of the Warrants is at the option of the holders and may be limited by the Ownership Limitations, certain of the Warrants contain anti-dilution protection, and certain of the Warrants may be exercised on a net basis, the number of shares of common stock that will actually be issued to the selling stockholders pursuant to the Series D Preferred Stock and the Warrants may be more or less than the number of Shares being offered by this prospectus. In addition, the Shares may be sold pursuant to this prospectus or in privately negotiated transactions. See “Plan of Distribution.” Because the selling stockholders may sell all, some or none of their Shares in this offering and because there are currently no agreements, arrangements or undertakings with respect to the sale of any of the Shares, we cannot estimate the number of Shares the selling stockholders will sell under this prospectus. The fourth column of the table assumes the sale of all of the Shares offered by the selling stockholders pursuant to this prospectus.

The selling stockholders have not held any position or office or had any other material relationship with us or any of our predecessors or affiliates within the past three years, other than: (i) the acquisition and beneficial ownership of the Shares described in the tables below or other of our debt or equity securities, (ii) with respect to DSM International B.V., (A) directors Philip Eykerman and Christoph Goppelsroeder are employees of Koninklijke DSM N.V., which is the parent of DSM International B.V. and a commercial partner of Amyris, and were designated to serve on our Board of Directors pursuant to the right of DSM International B.V. to designate two members of our Board of Directors under that certain Amended and Restated Stockholder Agreement, dated August 7, 2017, between us and DSM International B.V., (B) in December 2017 we sold Amyris Brasil Ltda., a subsidiary of Amyris that owned a production facility in Brotas, Brazil, to DSM and entered into a number of related agreements, including an agreement pursuant to which DSM supplies us with products useful in our
business from such production facility, and (C) we are party to certain commercial relationships with DSM for the development and commercialization of products, (iii) with respect to Foris Ventures, LLC, it is affiliated with our director John Doerr of Kleiner Perkins Caufield & Byers, a current stockholder, (iv) with respect to Vivo Capital LLC, director Frank Kung is a member of Vivo Capital LLC, which is an affiliate of each of Vivo Capital Fund VIII, L.P. and Vivo Capital Surplus Fund VIII, L.P., and was designated to serve on our Board of Directors pursuant to the right of Vivo to designate one member of our Board of Directors under that certain Stockholder Agreement, dated August 3, 2017, between us, on the one hand, and Vivo Capital Fund VIII, L.P. and Vivo Capital Surplus Fund VIII, L.P., on the other hand, and (v) with respect to Naxyris S.A., it is an investment vehicle owned by Naxos Capital Partners SCA Sicar; director Carole Piwnica is Director of NAXOS S.A.R.L. (Switzerland), which is affiliated with Naxos Capital Partners SCA Sicar, and was designated to serve on our Board of Directors pursuant to the right of Naxyris S.A. to designate one member of our Board of Directors.

Unless otherwise indicated in the footnotes below, we believe that the selling stockholders have sole voting and investment power with respect to all shares of our common stock beneficially owned by them. Since the date on which they provided us with the information below, the selling stockholders may have sold, transferred or otherwise disposed of some or all of their shares in transactions exempt from the registration requirements of the Securities Act.

<table>
<thead>
<tr>
<th>Name of Selling Stockholder</th>
<th>Number of Shares of Common Stock Owned Prior to Offering</th>
<th>Maximum Number of Shares of Common Stock to be Sold Pursuant to this Prospectus</th>
<th>Number of Shares of Common Stock of Owned After Offering</th>
<th>Percentage</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>DSM International B.V.</td>
<td>27,001,551</td>
<td>22.6</td>
<td>27,001,551</td>
<td>0</td>
<td>*</td>
</tr>
<tr>
<td>Foris Ventures, LLC</td>
<td>21,378,908</td>
<td>19.7</td>
<td>41,705,210</td>
<td>0</td>
<td>*</td>
</tr>
<tr>
<td>Vivo Capital Fund VIII, L.P.</td>
<td>9,645,204</td>
<td>8.77</td>
<td>14,818,673</td>
<td>0</td>
<td>*</td>
</tr>
<tr>
<td>Vivo Capital Surplus Fund VIII, L.P.</td>
<td>1,331,832</td>
<td>1.21</td>
<td>2,046,200</td>
<td>0</td>
<td>*</td>
</tr>
<tr>
<td>Naxyris S.A.</td>
<td>5,469,003</td>
<td>4.99</td>
<td>4,000,000</td>
<td>1,743,038</td>
<td>1.6</td>
</tr>
<tr>
<td>ETP BioHealth (I) Fund LP</td>
<td>4,104,857</td>
<td>3.8</td>
<td>4,104,857</td>
<td>0</td>
<td>*</td>
</tr>
<tr>
<td>Schottenfeld Opportunities Fund II, L.P.</td>
<td>2,692,308</td>
<td>2.5</td>
<td>2,692,308</td>
<td>0</td>
<td>*</td>
</tr>
<tr>
<td>Phase Five Partners, LP</td>
<td>128,205</td>
<td>*</td>
<td>128,205</td>
<td>0</td>
<td>*</td>
</tr>
<tr>
<td>Koyote Trading, LLC</td>
<td>650,051</td>
<td>*</td>
<td>384,615</td>
<td>265,436</td>
<td>*</td>
</tr>
<tr>
<td>CVI Investments, Inc.</td>
<td>5,541,095</td>
<td>4.99</td>
<td>2,000,000</td>
<td>5,646,136</td>
<td>4.99</td>
</tr>
<tr>
<td>John E. Abdo, as Trustee Under Trust Agreement Dated</td>
<td>5,038,346</td>
<td>4.7</td>
<td>1,440,000</td>
<td>3,598,346</td>
<td>3.4</td>
</tr>
<tr>
<td>The Benefit Of John E. Abdo</td>
<td>2,356,370</td>
<td>2.2</td>
<td>960,225</td>
<td>1,396,145</td>
<td>1.3</td>
</tr>
<tr>
<td>LMAP Kappa Limited</td>
<td>812,552</td>
<td>*</td>
<td>431,378</td>
<td>381,174</td>
<td>*</td>
</tr>
<tr>
<td>Wolverine Flagship Fund Trading Limited</td>
<td>2,818,197</td>
<td>2.6</td>
<td>1,080,000</td>
<td>1,738,197</td>
<td>1.6</td>
</tr>
<tr>
<td>B. Riley FBR, Inc.</td>
<td>181,818</td>
<td>*</td>
<td>181,818</td>
<td>0</td>
<td>*</td>
</tr>
<tr>
<td>Graham Tanaka</td>
<td>366,740</td>
<td>*</td>
<td>111,940</td>
<td>254,800</td>
<td>*</td>
</tr>
<tr>
<td>The TANAKA Growth Fund</td>
<td>235,692</td>
<td>*</td>
<td>89,551</td>
<td>146,141</td>
<td>*</td>
</tr>
<tr>
<td>All other selling stockholders</td>
<td>806,132</td>
<td>*</td>
<td>380,595</td>
<td>425,537</td>
<td>*</td>
</tr>
</tbody>
</table>

* Represents beneficial ownership of less than one percent of the outstanding shares of our common stock.

(1) The shares of common stock beneficially owned prior to this offering include 13,994,198 shares of common stock issuable upon exercise of Warrants held by DSM International B.V. DSM International B.V. is a wholly owned subsidiary of Koninklijke DSM N.V. Accordingly, Koninklijke DSM N.V. may be deemed to share beneficial ownership of the securities held of record by DSM International B.V. Koninklijke DSM N.V. is a publicly traded company with securities listed on the Amsterdam Stock Exchange. The address for DSM International B.V. is HET Overloon 1, 6411 TE Heerlen, Netherlands.
The shares of common stock beneficially owned prior to this offering include 2,838,864 shares of common stock issuable upon exercise of certain Warrants held by Foris Ventures, LLC (“Foris”). Foris also holds Warrants to purchase 20,326,302 shares of common stock, the exercise of which is subject to (A) a beneficial ownership limitation of 19.99% of our outstanding common stock and/or (B) the approval of our stockholders. We are proposing that our stockholders approve Foris beneficially owning in excess of 19.99% of our outstanding common stock, as well as the exercise of the Warrant held by Foris, the exercise of which subject to stockholder approval, at our 2019 annual meeting of stockholders scheduled to be held on November 19, 2019. If such proposal had been approved as of October 31, 2019, the number of shares beneficially owned by Foris, and the percentage of our outstanding common stock, would have been 41,705,210 shares and approximately 32.4%, respectively. Foris is indirectly owned by director John Doerr, who shares voting and investment control over the shares held by Foris. The address for Foris is 751 Laurel Street #717, San Carlos, California 94070.

The shares of common stock beneficially owned prior to this offering include (i) 738,747 shares issuable upon conversion of Series D Preferred Stock and (ii) 3,205,069 shares issuable upon exercise of certain Warrants held by Vivo Capital Fund VIII, L.P. Vivo Capital Fund VIII, L.P. also holds (i) 969,084 shares issuable upon conversion of Series D Preferred Stock and (ii) 4,204,385 shares of common stock issuable upon exercise of certain Warrants, the conversion and exercise of which, respectively, is subject to a beneficial ownership limitation of 9.99% of our outstanding common stock (the “Vivo Ownership Limitation”). The shares beneficially owned by Vivo Capital Fund VIII, L.P. have been allocated between the number of shares issuable upon the exercise of Warrants and conversion of Series D Preferred Stock based on the respective number of shares issuable upon such exercise or conversion, respectively. In addition, Vivo Capital Fund VIII, L.P. and Vivo Capital Surplus Fund VIII, L.P. are collectively subject to the Vivo Beneficial Ownership Limitation, together with other affiliates of Vivo, and have been allocated portions of the Vivo Beneficial Ownership Limitation pro rata based on the aggregate number of shares issuable upon conversion of their Series D Preferred Stock and exercise of their Warrants. Vivo Capital VIII, LLC is the general partner of Vivo Capital Fund VIII, L.P. The voting members of Vivo Capital VIII, LLC are Dr. Frank Kung, Dr. Albert Cha, Dr. Edgar Engleman, Dr. Chen Yu and Shan Fu, none of whom has individual voting or investment power with respect to the securities covered hereby. The address for Vivo Capital Fund VIII, L.P. is 192 Lytton Ave., Palo Alto, California 94301.

The shares of common stock beneficially owned prior to this offering include (i) 102,012 shares issuable upon conversion of Series D Preferred Stock and (ii) 442,561 shares issuable upon exercise of certain Warrants held by Vivo Capital Surplus Fund VIII, L.P. Vivo Capital Surplus Fund VIII, L.P. also holds (i) 133,818 shares issuable upon conversion of Series D Preferred Stock and (ii) 580,550 shares of common stock issuable upon exercise of certain Warrants, the conversion and exercise of which, respectively, is subject to the Vivo Ownership Limitation. The shares beneficially owned by Vivo Capital Surplus Fund VIII, L.P. have been allocated between the number of shares issuable upon the exercise of Warrants and conversion of Series D Preferred Stock based on the respective number of shares issuable upon such exercise or conversion, respectively. In addition, Vivo Capital Fund VIII, L.P. and Vivo Capital Surplus Fund VIII, L.P. are collectively subject to the Vivo Beneficial Ownership Limitation, together with other affiliates of Vivo, and have been allocated portions of the Vivo Beneficial Ownership Limitation pro rata based on the aggregate number of shares issuable upon conversion of their Series D Preferred Stock and exercise of their Warrants. Vivo Capital VIII, LLC is the general partner of Vivo Capital Surplus Fund VIII, L.P. The voting members of Vivo Capital VIII, LLC are Dr. Frank Kung, Dr. Albert Cha, Dr. Edgar Engleman, Dr. Chen Yu and Shan Fu, none of whom has individual voting or investment power with respect to the securities covered hereby. The address for Vivo Capital Surplus Fund VIII, L.P. is 192 Lytton Ave., Palo Alto, California 94301.

The shares of common stock beneficially owned prior to this offering include 4,096,369 shares of common stock issuable upon exercise of certain common stock purchase warrants, including certain Warrants, held by Naxyris S.A. (“Naxyris”). Naxyris also holds common stock purchase warrants to purchase 274,035 shares of common stock, the exercise of which is subject to a beneficial ownership limitation of 4.99% of our outstanding common stock. Naxyris is an investment vehicle owned by Naxos Capital Partners SCA Sicar. Carole Piwnica is a Director of NAXOS S.A.R.L. (Switzerland), which is affiliated with Naxos.
Capital Partners SCA Sicar. Ms. Piwnica disclaims beneficial ownership of all shares of Amyris common stock that are or may be beneficially owned by Naxyris or any of its affiliates. Jacques Sam Reckinger, in his capacity as Director of Naxyris, may be deemed to have investment discretion and voting power over the shares held by Naxyris. The address for Naxyris is 40 Boulevard Joseph II, L-1840, Luxembourg.

(6) The shares of common stock beneficially owned prior to this offering include 1,990,949 shares of common stock issuable upon exercise of Warrants held by ETP BioHealth (I) Fund LP. The address for ETP BioHealth (I) Fund LP is 9620 Medical Center Dr., Ste 200, Rockville, Maryland 20850.

(7) The shares of common stock beneficially owned prior to this offering include 2,692,308 shares of common stock issuable upon exercise of Warrants held by Schottenfeld Opportunities Fund II, L.P. Richard Schottenfeld, in his capacity as Manager of the general partner of Schottenfeld Opportunities Fund II, L.P., may also be deemed to have investment discretion and voting power over the shares held by Schottenfeld Opportunities Fund II, L.P. The address for Schottenfeld Opportunities Fund II, L.P. is 800 3rd Ave., Floor 10, New York, NY 10022.

(8) The shares of common stock beneficially owned prior to this offering include 128,205 shares of common stock issuable upon exercise of Warrants held by Phase Five Partners, L.P. Richard Schottenfeld, in his capacity as Manager of the general partner of Phase Five Partners, L.P., may also be deemed to have investment discretion and voting power over the shares held by Phase Five Partners, L.P. The address for Phase Five Partners, L.P. is 800 3rd Ave., Floor 10, New York, NY 10022.

(9) The shares of common stock beneficially owned prior to this offering include 384,615 shares of common stock issuable upon exercise of Warrants held by Koyote Trading, L.L.C. Richard Schottenfeld, in his capacity as Manager of Koyote Trading, L.L.C., may also be deemed to have investment discretion and voting power over the shares held by Koyote Trading, L.L.C. The address for Koyote Trading, L.L.C. is 800 3rd Ave., Floor 10, New York, NY 10022.

(10) The shares of common stock beneficially owned prior to this offering include (i) 4,820,712 shares issuable upon conversion of senior convertible notes held by CVI Investments, Inc. and (ii) 720,383 shares issuable upon exercise of certain Warrants held by CVI Investments, Inc. CVI Investments, Inc. also holds (i) 8,563,028 shares issuable upon conversion of senior convertible notes and (ii) 1,279,617 shares issuable upon exercise of certain Warrants, the conversion and exercise of which, respectively, is subject to a beneficial ownership limitation of 4.99% of our outstanding common stock (the "CVI Ownership Limitation"). The shares beneficially owned by CVI Investments, Inc. have been allocated between the number of shares issuable upon the exercise of Warrants and conversion of senior convertible notes held by CVI Investments, Inc. based on the respective number of shares issuable upon such exercise or conversion, respectively. Heights Capital Management, Inc., the authorized agent of CVI Investments, Inc. ("CVI"), has discretionary authority to vote and dispose of the shares held by CVI and may be deemed to be the beneficial owner of these shares. Martin Kobinger, in his capacity as Investment Manager of Heights Capital Management, Inc., may also be deemed to have investment discretion and voting power over the shares held by CVI. Mr. Kobinger disclaims any such beneficial ownership of the shares. The address for CVI Investments, Inc. is c/o Heights Capital Management, Inc., 101 California Street, Suite 3250, San Francisco, California 94111. CVI is affiliated with one or more FINRA members. CVI purchased the shares being registered hereunder in the ordinary course of business and at the time of purchase, had no agreements or understandings, directly or indirectly, with any other person to distribute such shares.

(11) Includes 1,544,732 shares issuable upon exercise of common stock purchase warrants, including certain Warrants, held by John E. Abdo, as Trustee Under Trust Agreement Dated March 15, 1976 For The Benefit Of John E. Abdo. The address for John E. Abdo, as Trustee Under Trust Agreement Dated March 15, 1976 For The Benefit Of John E. Abdo, is 1350 NE 56th Street, Suite 200, Fort Lauderdale, Florida 33334.

(12) The shares of common stock beneficially owned prior to this offering include 960,225 shares of common stock issuable upon exercise of Warrants held by LMAP Kappa Limited. Elliot Bossen, the CEO of Silverback Asset Management, LLC, the Investment Advisor for LMAP Kappa Limited, has the power to vote and dispose of the shares held by LMAP Kappa Limited and may be deemed to be the beneficial owner of these shares. The address for LMAP Kappa Limited is 1414 Raleigh Road, Suite 250, Chapel Hill, North Carolina 27517.

(13) The shares of common stock beneficially owned prior to this offering include 431,378 shares of common stock issuable upon exercise of Warrants held by Silverback Opportunistic Credit Master Fund Limited.
Elliot Bossen, the CEO of Silverback Asset Management, LLC, the Investment Advisor for Silverback Opportunistic Credit Master Fund Limited, has the power to vote and dispose of the shares held by Silverback Opportunistic Credit Master Fund Limited and may be deemed to be the beneficial owner of these shares. The address for Silverback Opportunistic Credit Master Fund Limited is 1414 Raleigh Road, Suite 250, Chapel Hill, North Carolina 27517.

(14) The shares of common stock beneficially owned prior to this offering include 1,080,000 shares of common stock issuable upon exercise of Warrants held by Wolverine Flagship Fund Trading Limited (the “Fund”). Wolverine Asset Management, LLC (“WAM”) is the investment manager of the Fund and has voting and investment power over these securities. The sole member and manager of WAM is Wolverine Holdings, L.P. (“Wolverine Holdings”). Robert R. Bellick and Christopher L. Gust may be deemed to control Wolverine Trading Partners, Inc. (“WTP”), the general partner of Wolverine Holdings. Each of Mr. Bellick, Mr. Gust, WTP, Wolverine Holdings and WAM disclaims beneficial ownership of the shares held by the Fund. The address for Wolverine Flagship Fund Trading Limited is c/o Wolverine Asset Management, LLC, 175 West Jackson Blvd., Suite 340, Chicago, Illinois 60604. WAM is under common control with several broker-dealer entities; however, the Fund purchased the shares being registered hereunder in the ordinary course of business and at the time of purchase, had no agreements or understandings, directly or indirectly, with any other person to distribute such shares.

(15) The shares of common stock beneficially owned prior to this offering consist of 181,818 shares of common stock issuable upon exercise of Warrants held by B. Riley FBR, Inc. The address for B. Riley FBR, Inc. is 11100 Santa Monica Blvd., Suite 800, Los Angeles, California 90025. B. Riley FBR, Inc. is a registered broker-dealer. B. Riley FBR, Inc. acquired the shares being registered hereunder in the ordinary course of business and at the time of issuance had no agreements or understandings, directly or indirectly, with any other person to distribute such shares.

(16) The shares of common stock beneficially owned prior to this offering include 49,751 shares of common stock issuable upon exercise of Warrants held by Graham Tanaka. The address for Mr. Tanaka is c/o Tanaka Capital Management, Inc., 369 Lexington Avenue, 20th Floor, New York, New York 10017.

(17) The shares of common stock beneficially owned prior to this offering include 39,800 shares of common stock issuable upon exercise of Warrants held by The TANAKA Growth Fund. Tanaka Capital Management, Inc., the authorized agent of The TANAKA Growth Fund, has discretionary authority to vote and dispose of the shares held by The TANAKA Growth Fund and may be deemed to be the beneficial owner of these shares. Graham Tanaka, in his capacity as Investment Manager of Tanaka Capital Management, Inc., may also be deemed to have investment discretion and voting power over the shares held by The TANAKA Growth Fund. Mr. Tanaka, on behalf of himself and Tanaka Capital Management, Inc., disclaims any such beneficial ownership of the shares. The address for The TANAKA Growth Fund is c/o Tanaka Capital Management, Inc., 369 Lexington Avenue, 20th Floor, New York, New York 10017.

(18) Includes other selling stockholders that collectively beneficially own less than one percent of our common stock.
SECURITY OWNERSHIP OF CERTAIN BENEFICIAL OWNERS AND MANAGEMENT

The following table sets forth, as of October 31, 2019, the number and percentage of outstanding shares of our common stock beneficially owned by:

- each person, or group of affiliated persons, known by us to beneficially own more than 5% of our outstanding shares of common stock;
- each of our current directors;
- each of our named executive officers; and
- all current directors and executive officers, as a group.

Beneficial ownership is determined in accordance with the rules of the Commission and generally includes any shares over which the individual or entity has sole or shared voting power or investment power. These rules also treat as outstanding all shares of capital stock that a person would receive upon the exercise of any option, warrant or right or through the conversion of a security held by that person that are immediately exercisable or convertible or exercisable or convertible within 60 days of the date as of which beneficial ownership is determined. These shares are deemed to be outstanding and beneficially owned by the person holding those options, warrants or rights or convertible securities for the purpose of computing the number of shares beneficially owned and the percentage ownership of that person, but they are not treated as outstanding for the purpose of computing the percentage ownership of any other person. The information does not necessarily indicate beneficial ownership for any other purpose. Except as indicated in the footnotes to the below table and pursuant to applicable community property laws, to our knowledge the persons named in the table below have sole voting and investment power with respect to all shares of common stock attributed to them in the table.
Information with respect to beneficial ownership has been furnished to us by each director and named executive officer and certain stockholders, and derived from publicly-available Commission beneficial ownership reports on Forms 3 and 4 and Schedules 13D and 13G filed by covered beneficial owners of our common stock. Percentage ownership of our common stock in the table is based on 105,502,887 shares of our common stock outstanding on October 31, 2019 (as reflected in the records of our stock transfer agent). Except as otherwise set forth below, the address of the beneficial owner is c/o Amyris, Inc., 5885 Hollis Street, Suite 100, Emeryville, California 94608.

### Table of Contents

<table>
<thead>
<tr>
<th>Name and Address of Beneficial Owner</th>
<th>Number of Shares Beneficially Owned (#)</th>
<th>Percent of Class (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>5% Stockholders</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>DSM International B.V.(1)</td>
<td>27,001,551</td>
<td>22.6</td>
</tr>
<tr>
<td>Foris Ventures, LLC(2)</td>
<td>21,378,908</td>
<td>19.7</td>
</tr>
<tr>
<td>Vivo Capital LLC(3)</td>
<td>10,979,969</td>
<td>9.98</td>
</tr>
<tr>
<td>Total Raffinage Chimie(4)</td>
<td>10,276,591</td>
<td>9.7</td>
</tr>
<tr>
<td>Loyola Capital Management, LLC(5)</td>
<td>8,300,000</td>
<td>7.9</td>
</tr>
<tr>
<td><strong>Directors and Named Executive Officers</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>John Melo(6)</td>
<td>845,344</td>
<td>*</td>
</tr>
<tr>
<td>John Doerr(2)(7)</td>
<td>21,660,021</td>
<td>19.99</td>
</tr>
<tr>
<td>Geoffrey Duyk(6)</td>
<td>18,498</td>
<td>*</td>
</tr>
<tr>
<td>Philip Eykerman(9)</td>
<td>15,364</td>
<td>*</td>
</tr>
<tr>
<td>Christoph Goppelsroeder(10)</td>
<td>0</td>
<td>*</td>
</tr>
<tr>
<td>Frank Kung(9)(11)</td>
<td>10,989,034</td>
<td>9.99</td>
</tr>
<tr>
<td>James McCann(12)</td>
<td>3,506</td>
<td>*</td>
</tr>
<tr>
<td>Steven Mills(13)</td>
<td>18,314</td>
<td>*</td>
</tr>
<tr>
<td>Carole Piwnica(14)</td>
<td>18,063</td>
<td>*</td>
</tr>
<tr>
<td>Lisa Qi</td>
<td>0</td>
<td>*</td>
</tr>
<tr>
<td>R. Neil Williams(15)</td>
<td>16,863</td>
<td>*</td>
</tr>
<tr>
<td>Patrick Yang(16)</td>
<td>71,263</td>
<td>*</td>
</tr>
<tr>
<td>Kathleen Valiasek(17)</td>
<td>280,452</td>
<td>*</td>
</tr>
<tr>
<td>Joel Cherry(16)</td>
<td>312,333</td>
<td>*</td>
</tr>
<tr>
<td>Eduardo Alvarez(19)</td>
<td>265,940</td>
<td>*</td>
</tr>
<tr>
<td>Nicole Kelsey(20)</td>
<td>130,925</td>
<td>*</td>
</tr>
<tr>
<td>All Directors and Executive Officers as a Group (16 Persons)(21)</td>
<td>34,645,920</td>
<td>30.3</td>
</tr>
</tbody>
</table>

* Represents beneficial ownership of less than one percent of the outstanding shares of our common stock.

1. Includes 13,994,198 shares of common stock issuable upon exercise of certain warrants held by DSM International B.V. (together with its affiliates, “DSM”). DSM International B.V. is a wholly owned subsidiary of Koninklijke DSM N.V. Accordingly, Koninklijke DSM N.V. may be deemed to share beneficial ownership of the securities held of record by DSM International B.V. Koninklijke DSM N.V. is a publicly traded company with securities listed on the Amsterdam Stock Exchange. The address for DSM International B.V. is HET Overloon 1, 6411 TE Heerlen, Netherlands.

2. Includes 2,838,864 shares of common stock issuable upon exercise of certain warrants held by Foris. Foris also holds warrants to purchase 20,326,302 shares of common stock, the exercise of which is subject to (A) a beneficial ownership limitation of 19.99% of the Company’s outstanding common stock and/or (B) the approval of the Company’s stockholders. We are proposing that our stockholders approve Foris beneficially owning in excess of 19.99% of our outstanding common stock, as well as the exercise of the warrant held by Foris, the exercise of which subject to stockholder approval, at our 2019 annual meeting of stockholders scheduled to be held on November 19, 2019. If such proposal had been approved as of October 31, 2019, the number of shares beneficially owned by Foris, and the percentage of our outstanding common stock, would have been 41,705,210 shares and approximately 32.4%, respectively Foris is indirectly owned
by director John Doerr, who shares voting and investment control over the shares held by Foris. The address for Foris is 751 Laurel Street #717, San Carlos, California 94070.

(3) Includes (i) 840,759 shares of common stock issuable upon conversion of shares of the Company’s Series D Convertible Preferred Stock (the “Series D Preferred Stock”) held by affiliates of Vivo Capital LLC (together with its affiliates, “Vivo”) and (ii) 3,647,630 shares of common stock issuable upon exercise of certain warrants held by Vivo. Vivo holds additional shares of Series D Preferred Stock, which are currently convertible into 1,102,902 shares of common stock, and additional warrants, which are currently exercisable for 4,784,935 shares of common stock, the conversion and exercise, respectively, of which is subject to a beneficial ownership limitation of 9.99% of the Company’s outstanding common stock. For purposes of this table, the shares beneficially owned by Vivo have been allocated between the number of shares issuable upon the conversion of shares of Series D Preferred Stock and the exercise of warrants based on the respective number of shares issuable upon such conversion or exercise. Director Frank Kung is a founding member of Vivo and a voting member of the general partner of Vivo entities that hold our common stock, Series D Preferred Stock and warrants, and may be deemed to share voting and dispositive power over the shares held by such entities. The address for Vivo is 192 Lytton Ave., Palo Alto, California 94301.

(4) Includes (i) 181,238 shares of common stock issuable upon conversion of certain convertible promissory notes held by Total Raffinage Chimie (“Total”) and (ii) 141,881 shares of common stock issuable upon exercise of certain warrants held by Total. The address for Total is 2, Place Jean Millier, La Défense 6, 92400 Courbevoie, France.

(5) The address for Loyola Capital Management, LLC is 222 E. Wisconsin Avenue, Suite 201, Lake Forest, Illinois 60045.

(6) Shares beneficially owned by Mr. Melo include (i) 559,863 restricted stock units, all of which were unvested as of October 31, 2019, and (ii) 150,462 shares of common stock issuable upon exercise of stock options that were exercisable within 60 days of October 31, 2019.

(7) Shares beneficially owned by Mr. Doerr include (i) 21,378,908 shares of common stock beneficially owned by Foris, in which Mr. Doerr indirectly owns all of the membership interests, (ii) 567 shares of common stock held by The Vallejo Ventures Trust U/T/A 2/12/96, of which Mr. Doerr is a trustee, (iii) 278,882 shares of common stock held by entities affiliated with Kleiner Perkins Caufield & Byers of which Mr. Doerr is an affiliate, excluding 16,399 shares over which Mr. Doerr has no voting or investment power, (iv) 2,266 restricted stock units, all of which were unvested as of October 31, 2019, and (v) 10,265 shares of common stock issuable upon exercise of stock options that were exercisable within 60 days of October 31, 2019.

(8) Shares beneficially owned by Dr. Duyk include (i) 9,566 restricted stock units, all of which were unvested as of October 31, 2019, and (ii) 4,666 shares of common stock issuable upon exercise of stock options that were exercisable within 60 days of October 31, 2019.

(9) Shares beneficially owned by Mr. Eykerman include (i) 2,932 restricted stock units, all of which were unvested as of October 31, 2019, and (ii) 7,699 shares of common stock issuable upon exercise of stock options that were exercisable within 60 days of October 31, 2019. Mr. Eykerman was appointed to the Board on May 18, 2017 as the designee of DSM. Mr. Eykerman disclaims beneficial ownership of all shares of Amyris common stock that are or may be beneficially owned by DSM or any of its affiliates.

(10) Mr. Goppelsroeder was appointed to the Board on November 2, 2017 as the designee of DSM. Mr. Goppelsroeder does not beneficially own any shares of Amyris common stock directly and disclaims beneficial ownership of all shares of Amyris common stock that are or may be beneficially owned by DSM or any of its affiliates.

(11) Shares beneficially owned by Dr. Kung include (i) 10,979,969 shares of common stock beneficially owned by Vivo, over which Dr. Kung may be deemed to share voting and dispositive power, (ii) 3,559 restricted stock units, all of which were unvested as of October 31, 2019 and (iii) 5,466 shares of common stock issuable upon exercise of stock options that were exercisable within 60 days of October 31, 2019. Dr. Kung was appointed to the Board on November 2, 2017 as the designee of Vivo. Dr. Kung disclaims beneficial ownership over shares of Amyris common stock that are or may be beneficially owned by Vivo except to the extent of his pecuniary interest therein.
Shares beneficially owned by Mr. McCann include (i) 2,266 restricted stock units, all of which were unvested as of October 31, 2019, and (ii) 750 shares of common stock issuable upon exercise of stock options that were exercisable within 60 days of October 31, 2019.

Shares beneficially owned by Mr. Mills include (i) 2,266 restricted stock units, all of which were unvested as of October 31, 2019, and (ii) 3,466 shares of common stock issuable upon exercise of stock options that were exercisable within 60 days of October 31, 2019.

Shares beneficially owned by Ms. Piwnica include (i) 2,266 restricted stock units, all of which were unvested as of October 31, 2019, and (ii) 10,265 shares of common stock issuable upon exercise of stock options that were exercisable within 60 days of October 31, 2019. Ms. Piwnica is Director of NAXOS S.A.R.L. (Switzerland), a consulting firm advising private investors, and was designated to serve as our director by Naxyris S.A., an investment vehicle owned by Naxos Capital Partners SCA Sicar. NAXOS S.A.R.L. (Switzerland) is affiliated with Naxos Capital Partners SCA Sicar. Ms. Piwnica disclaims beneficial ownership of all shares of Amyris common stock that are or may be beneficially owned by Naxyris S.A.

Shares beneficially owned by Mr. Williams include (i) 2,266 restricted stock units, all of which were unvested as of October 31, 2019, and (ii) 9,465 shares of common stock issuable upon exercise of stock options that were exercisable within 60 days of October 31, 2019.

Shares beneficially owned by Dr. Yang include (i) 2,266 restricted stock units, all of which were unvested as of October 31, 2019, and (ii) 17,065 shares of common stock issuable upon exercise of stock options that were exercisable within 60 days of October 31, 2019.

Shares beneficially owned by Ms. Valiasek include (i) 138,599 restricted stock units, all of which were unvested as of October 31, 2019, and (ii) 53,929 shares of common stock issuable upon exercise of stock options that were exercisable within 60 days of October 31, 2019.

Shares beneficially owned by Dr. Cherry include (i) 149,910 restricted stock units, all of which were unvested as of October 31, 2019, and (ii) 70,362 shares of common stock issuable upon exercise of stock options that were exercisable within 60 days of October 31, 2019. Dr. Cherry resigned from the Company effective June 7, 2019. In connection with his termination of employment, Dr. Cherry agreed to provide certain consulting services to the Company for a period of one year following the termination of his employment with the Company (which term may be extended by the mutual agreement of the parties). In exchange for, and as a result of, such services, Dr. Cherry’s outstanding equity awards will continue to remain outstanding and vest in accordance with, and subject to, the Company’s 2010 Equity Incentive Plan and the relevant award agreements during the term of his consulting agreement with the Company.

Shares beneficially owned by Mr. Alvarez include 30,000 shares of common stock issuable upon exercise of stock options that were exercisable within 60 days of October 31, 2019.

Shares beneficially owned by Ms. Kelsey include (i) 73,666 restricted stock units, all of which were unvested as of October 31, 2019, and (ii) 26,291 shares of common stock issuable upon exercise of stock options that were exercisable within 60 days of October 31, 2019.

Shares beneficially owned by all of our named executive officers and directors as a group include the shares of common stock described in footnotes 6 through 20 above.
DESCRIPTION OF CAPITAL STOCK

The following is a description of our capital stock, as well as certain provisions of our certificate of incorporation, bylaws and Delaware law. This is only a summary and is qualified in its entirety by reference to the description of our common stock included in our certificate of incorporation and our bylaws which have been filed as exhibits to the registration statement of which this prospectus is a part, and by the relevant provisions of the Delaware General Corporations Law, or the DGCL. See “Where You Can Find Additional Information”.

Common Stock

As of October 31, 2019, our authorized capital stock included 250,000,000 shares of common stock, par value $0.0001 per share, of which there were 105,502,887 shares outstanding as of October 31, 2019 (as reflected in the records of our stock transfer agent). A description of the material terms and provisions of our restated certificate of incorporation, as amended, and restated bylaws affecting the rights of holders of our common stock is set forth below. The description is intended as a summary only, and is qualified in its entirety by reference to our restated certificate of incorporation, as amended, and our restated bylaws that are filed as exhibits to the registration statement of which this prospectus forms a part.

Dividend Rights

Subject to preferences that may apply to shares of preferred stock outstanding from time to time, the holders of outstanding shares of our common stock are entitled to receive dividends out of funds legally available if our Board of Directors, in its discretion, determines to issue dividends, and only then at the times and in the amounts that our Board of Directors may determine.

Voting Rights

Each holder of our common stock is entitled to one vote for each share of common stock held on all matters submitted to a vote of stockholders. Our restated certificate of incorporation, as amended, eliminates the right of stockholders to cumulate votes for the election of directors and establishes a classified Board of Directors, divided into three classes with staggered three-year terms. Only one class of directors is elected at each annual meeting of our stockholders, with the other classes continuing in office for the remainder of their respective three-year terms.

No Preemptive or Similar Rights

Our common stock is not entitled to preemptive rights and is not subject to conversion, redemption or sinking fund provisions.

Right to Receive Liquidation Distributions

Upon our dissolution, liquidation or winding-up, the assets legally available for distribution to our stockholders are distributable ratably among the holders of our common stock, subject to prior satisfaction of all outstanding debt and liabilities and the preferential rights and payment of liquidation preferences, if any, on any outstanding shares of preferred stock.

Registration Rights

Certain of our stockholders, including certain entities affiliated with our directors and/or holders of five percent or more of our outstanding common stock, including DSM, Foris, Vivo and Total, hold registration rights pursuant to (i) the Amended and Restated Letter Agreement, dated May 8, 2014, by and among us and certain of our stockholders, (ii) the letter agreement, dated July 29, 2015, by and among us and certain investors, (iii) the
Registration Rights Agreement, dated October 20, 2015, by and among us and certain purchasers of our 9.50% Convertible Senior Notes due 2019, (iv) the warrant to purchase common stock issued by us to Nenter & Co., Inc. on November 16, 2016, (v) the Securities Purchase Agreement, dated May 8, 2017, by and among us and certain investors, (vi) the Securities Purchase Agreement, dated May 31, 2017, by and between us and the investor named therein, (vii) the Securities Purchase Agreement, dated August 2, 2017, by and between us and DSM International B.V., (viii) the Stockholder Agreement, dated August 3, 2017, by and between us and affiliates of Vivo Capital LLC, (ix) the Amended and Restated Stockholder Agreement, dated August 7, 2017, by and between us and DSM International B.V., (x) the Securities Purchase Agreement, dated November 19, 2018, between us and DSM International B.V., (xi) the Registration Rights Agreement, dated December 10, 2018, by and among us and the investors party thereto, (xii) the Security Purchase Agreement, dated April 24, 2019, by and between us and ETP BioHealth (I) Fund LP and (xiii) the common stock purchase warrants issued by us to each of Schottenfeld Opportunities Fund II, L.P., Phase Five Partners, LP and Koyote Trading, LLC on September 10, 2019.

Transfer Agent and Registrar
The transfer agent and registrar for our common stock is EQ Shareowner Services (formerly Wells Fargo Shareowner Services).

Stock Exchange Listing
Our common stock is listed on The Nasdaq Global Select Market under the symbol “AMRS.”

Anti-Takeover Provisions
The provisions of Delaware law, our restated certificate of incorporation, as amended, and our restated bylaws may have the effect of delaying, deferring or discouraging another person from acquiring control of our company.

Delaware Law
Section 203 of the Delaware General Corporation Law (“Section 203”) prevents some Delaware corporations from engaging, under some circumstances, in a business combination, which includes a merger or sale of at least 10% of the corporation’s assets, with any interested stockholder, meaning a stockholder who, together with affiliates and associates, owns or, within three years prior to the determination of interested stockholder status, did own 15% or more of the corporation’s outstanding voting stock, unless:

- the transaction is approved by the Board of Directors prior to the time that the interested stockholder became an interested stockholder;
- upon consummation of the transaction which resulted in the stockholder’s 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; or
- at or subsequent to such time that the stockholder became an interested stockholder, the business combination is approved by the Board of Directors and authorized at an annual or special meeting of stockholders by at least two-thirds of the outstanding voting stock which is not owned by the interested stockholder.

If Section 203 applied to us, these restrictions could prohibit or delay mergers or other takeover or change in control attempts and, accordingly, could discourage attempts to acquire us.

A Delaware corporation may “opt out” of the restrictions on business combinations contained in Section 203 with an express provision in its original certificate of incorporation or an express provision in its certificate of
incorporation or bylaws resulting from a stockholders’ amendment approved by at least a majority of its outstanding voting shares. We have agreed to opt out of Section 203 through our restated certificate of incorporation, as amended, but our restated certificate of incorporation as amended, contains substantially similar protections to our company and stockholders as those afforded under Section 203, except that we have agreed with Total that it will not be deemed to be “interested stockholders” for purposes of such protections.

Restated Certificate of Incorporation and Restated Bylaw Provisions

Our restated certificate of incorporation, as amended, and our restated bylaws include a number of provisions that may have the effect of deterring hostile takeovers or delaying or preventing changes in control of our company or management team, including the following:

- **Board of Directors Vacancies.** Our restated certificate of incorporation, as amended, and restated bylaws authorize only our Board of Directors to fill vacant directorships. In addition, the number of directors constituting our Board of Directors will be set only by resolution adopted by a majority vote of our entire Board of Directors. These provisions prevent stockholders from increasing the size of our Board of Directors and gaining control of our Board of Directors by filling the resulting vacancies with their own nominees.

- **Classified Board.** Our restated certificate of incorporation, as amended, and restated bylaws provide that our Board of Directors is classified into three classes of directors. The existence of a classified board could delay a successful tender offeror from obtaining majority control of our Board of Directors, and the prospect of that delay might deter a potential offeror. Pursuant to Delaware law, the directors of a corporation having a classified board may be removed by the stockholders only for cause. In addition, stockholders will not be permitted to cumulate their votes for the election of directors.

- **Stockholder Action; Special Meeting of Stockholders.** Our restated certificate of incorporation, as amended, provides that our stockholders may not take action by written consent, but may only take action at annual or special meetings of our stockholders. Our restated bylaws further provide that special meetings of our stockholders may be called only by a majority of our Board of Directors, the chair of our Board of Directors, or our chief executive officer or our president.

- **Advance Notice Requirements for Stockholder Proposals and Director Nominations.** Our restated bylaws provide for advance notice procedures for stockholders seeking to bring business before our annual meeting of stockholders, or to nominate candidates for election as directors at our annual meeting of stockholders. Our restated bylaws also specify certain requirements regarding the form and content of a stockholder’s notice. These provisions may preclude our stockholders from bringing matters before our annual meeting of stockholders or from making nominations for directors at our annual meeting of stockholders.

- **Issuance of Undesignated Preferred Stock.** Under our restated certificate of incorporation, as amended, our Board of Directors has the authority, without further action by the stockholders, to issue shares of undesignated preferred stock with rights and preferences, including voting rights, designated from time to time by the Board of Directors. The existence of authorized but unissued shares of preferred stock enables 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.
We are registering the shares of common stock offered hereby to permit the resale of these shares of common stock by the holders thereof from time to time after the date of this prospectus. We will not receive any of the proceeds from the sale by the selling stockholders of the shares of common stock offered hereby. We will bear all fees and expenses incident to our obligation to register these shares of common stock.

The selling stockholders may sell all or a portion of the shares of common stock held by them and offered hereby from time to time directly or through one or more underwriters, broker-dealers or agents (which may include B. Riley FBR, Inc., one of the selling stockholders and a registered broker-dealer). If the shares of common stock are sold through underwriters or broker-dealers, the selling stockholders will be responsible for underwriting discounts or commissions or agent’s commissions. The shares of common stock may be sold in one or more transactions at fixed prices, at prevailing market prices at the time of the sale, at varying prices determined at the time of sale or at negotiated prices. These sales may be effected in transactions, which may involve crossings or block transactions, pursuant to one or more of the following methods:

• on any national securities exchange or quotation service on which the shares may be listed or quoted at the time of sale;
• in the over-the-counter market;
• in transactions otherwise than on these exchanges or systems or in the over-the-counter market;
• through the writing or settlement of options, whether such options are listed on an options exchange or otherwise;
• ordinary brokerage transactions and transactions in which the broker-dealer solicits purchasers;
• block trades in which the broker-dealer will attempt to sell the shares as agent but may position and resell a portion of the block as principal to facilitate the transaction;
• purchases by a broker-dealer as principal and resale by the broker-dealer for its account;
• an exchange distribution in accordance with the rules of the applicable exchange;
• privately negotiated transactions;
• short sales made after the date the Registration Statement is declared effective by the Commission;
• broker-dealers may agree with a selling stockholder to sell a specified number of such shares at a stipulated price per share;
• a combination of any such methods of sale; and
• any other method permitted pursuant to applicable law.

The selling stockholders may also sell shares of common stock under Rule 144 promulgated under the Securities Act, if available, rather than under this prospectus. In addition, the selling stockholders may transfer the shares of common stock by other means not described in this prospectus. If the selling stockholders effect such transactions by selling shares of common stock to or through underwriters, broker-dealers or agents (which may include B. Riley FBR, Inc., one of the selling stockholders and a registered broker-dealer), such underwriters, broker-dealers or agents may receive commissions in the form of discounts, concessions or commissions from the selling stockholders or commissions from purchasers of the shares of common stock for whom they may act as agent or to whom they may sell as principal (which discounts, concessions or commissions as to particular underwriters, broker-dealers or agents may be in excess of those customary in the types of transactions involved). In connection with sales of the shares of common stock or otherwise, the selling stockholders may enter into hedging transactions with broker-dealers, which may in turn engage in short sales of the shares of common stock in the course of hedging in positions they assume. The selling stockholders may also sell shares of common stock.
short and deliver shares of common stock covered by this prospectus to close out short positions and to return borrowed shares in connection with such
short sales. The selling stockholders may also loan or pledge shares of common stock to broker-dealers that in turn may sell such shares.

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

To the extent required by the Securities Act and the rules and regulations thereunder, the selling stockholders and any broker-dealer participating in the
distribution of the shares of common stock may be deemed to be "underwriters" within the meaning of the Securities Act, and any commission paid, or
any discounts or concessions allowed to, any such broker-dealer may be deemed to be underwriting commissions or discounts under the Securities Act.

At the time a particular offering of the shares of common stock is made, a prospectus supplement, if required, will be distributed, which will set forth the
aggregate amount of shares of common stock being offered and the terms of the offering, including the name or names of any broker-dealers or agents,
any discounts, commissions and other terms constituting compensation from the selling stockholders and any discounts, commissions or concessions
allowed or re-allowed or paid to broker-dealers.

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

There can be no assurance that any selling stockholder will sell any or all of the shares of common stock registered pursuant to the registration statement
of which this prospectus forms a part.

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

Once sold under the registration statement of which this prospectus forms a part, the shares of common stock offered hereby will be freely tradable in
the hands of persons other than our affiliates.
LEGAL MATTERS

The validity of the issuance of shares of common stock offered hereby will be passed upon for us by Fenwick & West LLP, Mountain View, California.

EXPERTS

The consolidated financial statements of Amyris, Inc. as of December 31, 2018 and for the year then ended, incorporated in this prospectus by reference to the Annual Report on Form 10-K/A for the year ended December 31, 2018, have been so incorporated in reliance on the report (which refers to a change in accounting for revenue recognition in 2018 due to the adoption of Topic 606, Revenue from Contracts with Customers, and contains an emphasis paragraph that states that the Company has suffered recurring losses from operations and has current debt service requirements that raise substantial doubt about its ability to continue as a going concern) of Macias Gini & O’Connell LLP, an independent registered public accounting firm, given on the authority of said firm as experts in auditing and accounting.

The consolidated financial statements as of December 31, 2017 and for the year then ended incorporated by reference in this Prospectus have been so incorporated in reliance on the report of BDO USA, LLP, an independent registered public accounting firm (the report on the financial statements contains an explanatory paragraph regarding the Company’s ability to continue as a going concern), incorporated herein by reference, given on the authority of said firm as experts in auditing and accounting.

WHERE YOU CAN FIND MORE INFORMATION

We are subject to the filing requirements of the Securities Exchange Act of 1934 (the “Exchange Act”). Therefore, we file periodic reports, proxy statements and other information with the Commission. The Commission maintains a website (www.sec.gov) that contains reports, proxy and information statements, and other information regarding issuers that file electronically.

We make our Annual Reports on Form 10-K, Quarterly Reports on Form 10-Q, Current Reports on Form 8-K and all amendments to such reports filed or furnished pursuant to Section 13(a) or 15(d) of the Exchange Act available free of charge through a link on the Investors section of our website located at www.amyris.com (under “Financial Information — SEC Filings”) as soon as reasonably practicable after they are filed with or furnished to the Commission. The information contained in or accessible through our website or contained on other websites is not a part of, and is not incorporated into, this prospectus.

26
INCORPORATION OF CERTAIN INFORMATION BY REFERENCE

The Commission allows us to “incorporate by reference” into this prospectus the information we file with it, which means that we can disclose important information to you by referring you to those documents. The information incorporated by reference is considered to be part of this prospectus, and information in documents that we subsequently file with the Commission will automatically update and supersede information in this prospectus. We incorporate by reference into this prospectus the documents listed below and any future filings made by us with the Commission under Section 13(a), 13(c), 14 or 15(d) of the Exchange Act (other than those documents or the portions of those documents furnished and not filed in accordance with Commission rules) prior to the termination of this offering, including all filings made after the date of the initial registration statement and prior to the effectiveness of the registration statement. We hereby incorporate by reference the following documents (other than the portions of those documents furnished and not filed in accordance with Commission rules):

- Our Annual Report on Form 10-K for the fiscal year ended December 31, 2018, filed with the Commission on October 1, 2019, as amended by Amendment No. 1 on Form 10-K/A filed with the Commission on October 4, 2019;
- Our Definitive Proxy Statement on Schedule 14A, filed with the Commission on October 10, 2019;
- Our Quarterly Reports on Form 10-Q for the quarters ended March 31, 2019, June 30, 2019 and September 30, 2019, filed with the Commission on October 7, 2019, October 7, 2019 and November 12, 2019, respectively;
- Our Current Reports on Form 8-K filed with the Commission on January 2, 2019, January 7, 2019, February 22, 2019, March 18, 2019 (solely with respect to Items 1.01, 2.03 and 4.02), April 16, 2019, April 17, 2019, April 19, 2019, April 30, 2019, May 14, 2019, May 16, 2019 (four filings), May 17, 2019, May 20, 2019, June 4, 2019 (solely with respect to Item 5.02), June 17, 2019, June 20, 2019, June 28, 2019, July 9, 2019, July 11, 2019, July 15, 2019 (solely with respect to Items 1.01 and 2.03), July 19, 2019, July 24, 2019, July 25, 2019, July 29, 2019, August 1, 2019, August 7, 2019, August 14, 2019, August 20, 2019, August 27, 2019, September 4, 2019, September 11, 2019, September 23, 2019, October 7, 2019 (solely with respect to Item 3.01), October 16, 2019, October 30, 2019, November 1, 2019, November 6, 2019 and November 12, 2019; and
- The description of our common stock contained in our registration statement on Form 8-A filed with the Commission on September 24, 2010, including any amendment or report filed for the purpose of updating such description.

We will provide to each person, including any beneficial holder, to whom a prospectus is delivered, at no cost to the requestor, upon written or oral request, a copy of any or all information that has been incorporated by reference in this prospectus but not delivered with this prospectus, including any exhibits that are specifically incorporated by reference in that information. You may request a copy of these filings by sending an e-mail request to Amyris Investor Relations at investor@amyris.com, calling (510) 740-7481, or writing to Amyris Investor Relations at 5885 Hollis Street, Suite 100, Emeryville, California 94608.

Copies of these filings are also available free of charge through a link on the Investors section of our website located at www.amyris.com (under “Financial Information — SEC Filings”) as soon as reasonably practicable after they are filed with or furnished to the Commission. The information contained in or accessible through our website or contained on other websites is not a part of, and is not incorporated into, this prospectus.
We have not authorized any dealer, salesperson or other person to give any information or represent anything not contained or incorporated by reference in this prospectus. We do not take any responsibility for, and can provide no assurance as to the reliability of, any information that others may give you. This prospectus does not offer to sell any securities in any jurisdiction where it is unlawful. Neither the delivery of this prospectus, nor any sale made hereunder, shall create any implication that the information in this prospectus is correct after the date hereof.
PART II

INFORMATION NOT REQUIRED IN PROSPECTUS

ITEM 13. OTHER EXPENSES OF ISSUANCE AND DISTRIBUTION

The following table sets forth all expenses to be paid by us, other than estimated underwriting discounts and commissions, if any, in connection with this offering. All amounts shown are estimates except for the Commission registration fee:

<table>
<thead>
<tr>
<th>Item</th>
<th>Amount to be paid</th>
</tr>
</thead>
<tbody>
<tr>
<td>Commission registration fee</td>
<td>$ 51,481.77</td>
</tr>
<tr>
<td>Legal fees and expenses</td>
<td>$</td>
</tr>
<tr>
<td>Accounting fees and expenses</td>
<td>$</td>
</tr>
<tr>
<td>Transfer agent fees and expenses</td>
<td>$</td>
</tr>
<tr>
<td>Miscellaneous expenses</td>
<td>$</td>
</tr>
<tr>
<td>Total</td>
<td>$</td>
</tr>
</tbody>
</table>

* Estimated expenses not presently known.

ITEM 14. INDEMNIFICATION OF DIRECTORS AND OFFICERS

Section 145 of the Delaware General Corporation Law (the “DGCL”) authorizes a court to award, or a corporation’s Board of Directors to grant, indemnity to directors and officers under certain circumstances and subject to certain limitations. The terms of Section 145 of the DGCL are sufficiently broad to permit indemnification under certain circumstances for liabilities, including reimbursement of expenses incurred, arising under the Securities Act of 1933, as amended (the “Securities Act”).

Our restated certificate of incorporation, as amended, limits the personal liability of directors for breach of fiduciary duty to the maximum extent permitted by the DGCL, and provides that no director will have personal liability to us or to its stockholders for monetary damages for breach of fiduciary duty or other duty as a director. However, these provisions do not eliminate or limit the liability of any director for:

• any breach of the director’s duty of loyalty to us or our stockholders;
• acts or omissions not in good faith or that involve intentional misconduct or a knowing violation of law;
• voting or assenting to unlawful payments of dividends, stock repurchases or other distributions; or
• any transaction from which the director derived an improper personal benefit.

Any amendment to or repeal of these provisions will not eliminate or reduce the effect of these provisions in respect of any act, omission or claim that occurred or arose prior to such amendment or repeal. If the DGCL is amended to provide for further limitations on the personal liability of directors of corporations, then the personal liability of our directors will be further limited to the greatest extent permitted by the DGCL.

As permitted by the DGCL, our restated bylaws provide that:

• we are required to indemnify its directors and officers to the fullest extent permitted by the DGCL, subject to very limited exceptions;
• the registrant may indemnify its other employees and agents as set forth in the DGCL;
we are required to advance expenses, as incurred, to its directors and officers in connection with a legal proceeding to the fullest extent permitted by the DGCL, subject to very limited exceptions; and

the rights conferred in the bylaws are not exclusive.

In addition, we have entered into indemnification agreements with each of its directors and executive officers that may be broader than the specific indemnification provisions contained in the DGCL. These indemnification agreements require us, among other things, to indemnify its directors and executive officers against liabilities that may arise by reason of their status or service. These indemnification agreements also require us to advance all expenses incurred by its directors and executive officers in investigating or defending any such action, suit or proceeding. The indemnification provisions in our restated certificate of incorporation, as amended, and restated bylaws and the indemnification agreements entered into between us and each of our directors and executive officers may be sufficiently broad to permit indemnification of our directors and officers for liabilities arising under the Securities Act.

We maintain an insurance policy that covers certain liabilities of its directors and officers arising out of claims based on acts or omissions in their capacities as our directors or officers.

Certain of our non-employee directors may, through their relationships with their employers, be insured and/or indemnified against certain liabilities incurred in their capacity as members of our board of directors.

Reference is made to the following documents filed as exhibits to this registration statement regarding relevant indemnification provisions described above:

<table>
<thead>
<tr>
<th>Exhibit Number</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>3.01</td>
<td>Restated Certificate of Incorporation</td>
</tr>
<tr>
<td>3.12</td>
<td>Restated Bylaws</td>
</tr>
<tr>
<td>10.01</td>
<td>Form of Indemnity Agreement between registrant and its directors and executive officers</td>
</tr>
</tbody>
</table>

ITEM 15. RECENT SALES OF UNREGISTERED SECURITIES

On November 16, 2016, we issued a warrant to purchase up to 10 million shares of our common stock to Nenter & Co., Inc. (“Nenter”), in a private placement pursuant to the exemption from registration under Section 4(a)(2) of the Securities Act and Regulation D promulgated under the Securities Act. The warrant was issued pursuant to the terms of, and as consideration for, the entry by Nenter into a Cooperation Agreement with us, under which the parties agreed to collaborate to create and develop certain compounds and, in the event the parties achieve certain specified development targets, the parties would establish and implement a worldwide manufacturing and commercialization plan relating thereto.

On January 11, 2017, we issued $19.1 million aggregate principal amount of our 9.50% Convertible Senior Notes due 2019 to certain accredited investors, in exchange for the surrender and cancellation of $15.3 million of our outstanding 3% Senior Unsecured Convertible Promissory Notes due 2017, together with accrued and unpaid interest thereon, in a private exchange pursuant to the exemption from registration under Section 4(a)(2) of the Securities Act and Regulation D promulgated under the Securities Act (the “3% Note Exchange”).

On May 11, 2017 and May 31, 2017, we sold and issued an aggregate of 70,903.8756 shares of our Series B 17.38% Convertible Preferred Stock, par value $0.0001 per share (the “Series B Preferred Stock”), warrants to purchase up to 14,768,380 shares of our common stock and warrants to purchase up to a number of shares of our common stock sufficient to provide full-ratchet anti-dilution protection with respect to the effective price paid for the common stock underlying the Series B Preferred Stock to certain accredited investors, including certain
existing stockholders affiliated with members of our Board of Directors. The Series B Preferred Stock and warrants were sold to the purchasers thereof in exchange for (i) aggregate cash consideration of $30.7 million and (ii) the cancellation of $40.2 million of outstanding indebtedness (including accrued interest thereon) owed to such purchasers. The Series B Preferred Stock and warrants were issued in a private placement pursuant to the exemption from registration under Section 4(a)(2) of the Securities Act and Regulation D promulgated under the Securities Act.

On May 11, 2017, we issued an aggregate of 20,921 shares of our Series C Convertible Preferred Stock, par value $0.0001 per share, to Foris and Naxyris S.A. ("Naxyris"), in exchange for the surrender of an aggregate of 1,394,706 shares of our common stock, in a private exchange pursuant to the exemption from registration under Section 3(a)(9) of the Securities Act.

On August 3, 2017, we sold and issued an aggregate of 2,826,711 shares of common stock, 12,958,21196 shares of our Series D Convertible Preferred Stock, par value $0.0001 per share, warrants to purchase up to an aggregate of 5,575,118 shares of our common stock, and warrants to purchase up to a number of shares of common stock sufficient to provide full-ratchet anti-dilution protection with respect to the effective price paid for the common stock underlying the Series D Preferred Stock, to affiliates of Vivo in exchange for aggregate cash consideration of $25.0 million in a private placement pursuant to the exemption from registration under Section 4(a)(2) of the Securities Act and Regulation D promulgated under the Securities Act.

On August 7, 2017, we sold and issued 25,000 shares of Series B Preferred Stock, a warrant to purchase up to 3,968,116 shares of our common stock, and a warrant to purchase up to a number of shares of common stock sufficient to provide full-ratchet anti-dilution protection with respect to the effective price paid for the common stock underlying the Series B Preferred Stock, to DSM International B.V. in exchange for aggregate cash consideration of $25.0 million in a private placement pursuant to the exemption from registration under Section 4(a)(2) of the Securities Act and Regulation D promulgated under the Securities Act.

On April 12, 2018, we issued warrants to purchase up to an aggregate of 3,616,174 shares of our common stock to certain holders of our common stock purchase warrants issued in May 2017, in exchange for such holders exercising for cash a portion of such May 2017 warrants and surrendering a separate portion of such May 2017 warrants for cancellation, in a private placement pursuant to the exemption from registration under Section 4(a)(2) of the Securities Act and Regulation D promulgated under the Securities Act.

On August 17, 2018, we issued warrants to purchase up to an aggregate of 4,877,386 shares of our common stock to Foris, in exchange for Foris exercising for cash a portion of its warrants purchased in May 2017 and surrendering a separate portion of such May 2017 warrants for cancellation, in a private placement pursuant to the exemption from registration under Section 4(a)(2) of the Securities Act and Regulation D promulgated under the Securities Act.

On August 17, 2018 and August 20, 2018, we issued warrants to purchase up to an aggregate of 7,219,778 shares of our common stock to affiliates of Vivo, in exchange for Vivo exercising for cash a portion of its warrants purchased in August 2017 and surrendering a separate portion of such August 2017 warrants for cancellation, in a private placement pursuant to the exemption from registration under Section 4(a)(2) of the Securities Act and Regulation D promulgated under the Securities Act.

On November 20, 2018, we issued 1,643,991 shares of our common stock to DSM, in consideration of certain agreements of DSM set forth in an amendment to the supply agreement, dated December 28, 2017, between us and DSM, in a private placement pursuant to the exemption from registration under Section 4(a)(2) of the Securities Act and Regulation D promulgated under the Securities Act.

On December 10, 2018, we issued $60 million in aggregate principal amount of senior convertible notes to certain accredited investors, in exchange for an equal cash amount, in a private placement pursuant to the
exemption from registration under Section 4(a)(2) of the Securities Act and Regulation D promulgated under the Securities Act.

On April 16, 2019, we sold and issued to Foris 6,732,369 shares of our common stock, as well as a warrant to purchase up to 5,424,804 shares of our common stock, in exchange for aggregate cash proceeds of $20 million, in a private placement pursuant to the exemption from registration under Section 4(a)(2) of the Securities Act and Regulation D promulgated under the Securities Act.

On April 26, 2019, we sold and issued (i) 2,832,440 shares of our common stock, as well as a warrant to purchase up to 3,983,230 shares of our common stock, to Foris and (ii) an aggregate of 2,043,781 shares of our common stock, as well as warrants to purchase up to an aggregate of 1,635,025 shares of common stock, to certain non-affiliated accredited investors, in exchange for aggregate cash proceeds of $23.2 million, in each case in private placements pursuant to the exemption from registration under Section 4(a)(2) of the Securities Act and Regulation D promulgated under the Securities Act.

On April 29, 2019, we sold and issued (i) an aggregate of 913,529 shares of our common stock, as well as warrants to purchase up to an aggregate of 1,212,787 shares of our common stock, to affiliates of Vivo and (ii) an aggregate of 323,382 shares of our common stock, as well as warrants to purchase up to an aggregate of 258,704 shares of our common stock, to certain non-affiliated accredited investors, in exchange for aggregate cash proceeds of $5.8 million, in each case in private placements pursuant to the exemption from registration under Section 4(a)(2) of the Securities Act and Regulation D promulgated under the Securities Act.

On May 3, 2019, we sold and issued 1,243,781 shares of our common stock, as well as a warrant to purchase up to 995,024 shares of our common stock, to an accredited investor, in exchange for cash proceeds of $5 million, in a private placement pursuant to the exemption from registration under Section 4(a)(2) of the Securities Act and Regulation D promulgated under the Securities Act.

On May 10, 2019, we issued an aggregate of 3,479,008 shares of our common stock, as well as warrants to purchase an aggregate of up to 1,391,603 shares of our common stock, to certain accredited investors, in exchange for the surrender and cancellation of $13.5 million principal amount of our 6.50% Convertible Senior Notes due 2019 (“6.50% Notes”), together with accrued and unpaid interest thereon, in a private exchange pursuant to the exemption from registration under Section 3(a)(9) of the Securities Act.

On May 14, 2019, we issued 1,122,460 shares of our common stock, as well as a warrant to purchase up to 352,638 shares of our common stock, to Foris, in exchange for the surrender and cancellation of $5 million principal amount of 6.50% Notes, together with accrued and unpaid interest thereon, in a private exchange pursuant to the exemption from registration under Section 3(a)(9) of the Securities Act.

On May 15, 2019, we issued 2,500,000 shares of our common stock to an accredited investor, in exchange for the surrender and cancellation of $10 million principal amount of 6.50% Notes, together with accrued and unpaid interest thereon, in a private exchange pursuant to the exemption from registration under Section 3(a)(9) of the Securities Act.

On May 15, 2019, we issued a senior convertible note in the principal amount of $53.3 million, as well as a warrant to purchase up to 2,000,000 shares of our common stock, to an accredited investor, in exchange for the surrender and cancellation of one of our senior convertible notes issued on December 10, 2018 with a current principal amount of $53.3 million, in a private exchange pursuant to the exemption from registration under Section 3(a)(9) of the Securities Act.

On May 15, 2019, we issued a senior convertible note in the principal amount of $9.7 million to an accredited investor, in exchange for the surrender and cancellation of $9.7 million principal amount of 6.50% Notes, in a private exchange pursuant to the exemption from registration under Section 3(a)(9) of the Securities Act.
On June 24, 2019, we issued a senior convertible note in the principal amount of $4.7 million, as well as a warrant to purchase up to 181,818 shares of our common stock, to an accredited investor, in exchange for the surrender and cancellation of one of our senior convertible notes issued on December 10, 2018 with a current principal amount of $4.7 million, in a private exchange pursuant to the exemption from registration under Section 3(a)(9) of the Securities Act.

On July 8, 2019, we issued 1,767,632 shares of our common stock, as well as a warrant to purchase up to 1,080,000 shares of our common stock, to an accredited investor, in exchange for the surrender and cancellation of one of our senior convertible notes issued on January 15, 2014 with a current principal amount of $5.1 million, in a private exchange pursuant to the exemption from registration under Section 3(a)(9) of the Securities Act.

On July 24, 2019, we issued a senior convertible note in the principal amount of $68.3 million, as well as a warrant to purchase up to 2,000,000 shares of our common stock, to an accredited investor, in exchange for the surrender and cancellation of the senior convertible note issued on May 15, 2019 with a current principal amount of $53.3 million and a warrant to purchase up to 2,000,000 shares of our common stock issued on May 15, 2019, in a private exchange pursuant to the exemption from registration under Section 3(a)(9) of the Securities Act.

On August 14, 2019, we issued a warrant to purchase up to 1,438,829 shares of our common stock to Foris, in consideration of certain agreements and waivers of Foris set forth in an amendment and waiver to the loan and security agreement, dated June 29, 2018, as amended, between us and Foris, in a private placement pursuant to the exemption from registration under Section 4(a)(2) of the Securities Act and Regulation D promulgated under the Securities Act.

On August 14, 2019, we issued a warrant to purchase up to 2,000,000 shares of our common stock to Naxyris, in consideration of Naxyris making available to us a secured term loan facility in the principal amount of $10.4 million pursuant to a loan and security agreement, dated August 14, 2019, between us and Naxyris, in a private placement pursuant to the exemption from registration under Section 4(a)(2) of the Securities Act and Regulation D promulgated under the Securities Act.

On August 28, 2019, we issued a warrant to purchase up to 4,871,795 shares of our common stock to Foris, in consideration of Foris making available to us an unsecured term loan facility in the principal amount of $19 million pursuant to a credit agreement, dated August 28, 2019, between us and Foris, in a private placement pursuant to the exemption from registration under Section 4(a)(2) of the Securities Act and Regulation D promulgated under the Securities Act.

On September 10, 2019, we issued warrants to purchase up to an aggregate of 3,128,205 shares of our common stock to certain accredited investors, in consideration of such investors making available to us unsecured term loan facilities in the aggregate principal amount of $12.5 million pursuant to three separate credit agreements, each dated September 10, 2019, between us and such investors, in each case in private placements pursuant to the exemption from registration under Section 4(a)(2) of the Securities Act and Regulation D promulgated under the Securities Act.

On October 11, 2019, we issued a warrant to purchase up to 2,000,000 shares of our common stock to Foris, in consideration of Foris making available to us a secured term loan facility in the principal amount of $10 million under the loan and security agreement, dated June 29, 2018, as amended, between us and Foris, in a private placement pursuant to the exemption from registration under Section 4(a)(2) of the Securities Act and Regulation D promulgated under the Securities Act.

On October 28, 2019, we issued a warrant to purchase up to 2,000,000 shares of our common stock to Naxyris, in consideration of Naxyris making available to us a secured term loan facility in the principal amount of $10.4 million under the loan and security agreement, dated August 14, 2019, as amended and restated on October 28, 2019, between us and Naxyris, in a private placement pursuant to the exemption from registration under Section 4(a)(2) of the Securities Act and Regulation D promulgated under the Securities Act.
No underwriters or agents were involved in the issuance or sale of such securities, except as follows: (i) an exchange agent was used in connection with the 3% Note Exchange, (ii) Rodman & Renshaw, a unit of H.C. Wainwright & Co., LLC, acted as placement agent in connection with the May 11, 2017 offering of 65,204 shares of Series B Preferred Stock, warrants to purchase 13,863,648 shares of our common stock and related dilution warrants and received aggregate fees of $499,958.47 in connection therewith, (iii) Oppenheimer & Co. Inc. acted as placement agent in connection with the issuance of the April 2018 warrants, (iv) B. Riley FBR, Inc. acted as our advisor in connection with the issuance of the August 2018 warrants and (v) Oppenheimer & Co. Inc. acted as placement agent and B. Riley FBR, Inc. acted as our advisor in connection with the issuance of the December 2018 notes, and we paid an aggregate of $3.8 million in fees to such agent and advisor in connection with the offering and sale of such notes. The securities listed above were issued in private placements pursuant to the exemption from registration under Section 4(a)(2) of the Securities Act and Regulation D promulgated under the Securities Act, or in private exchanges pursuant to the exemption from registration under Section 3(a)(9) of the Securities Act. The investors participating in the offerings or exchanges acquired the applicable securities for investment purposes only and without intent to resell, were able to fend for themselves in these transactions, and are accredited investors as defined in Rule 501 of Regulation D promulgated under Section 3(b) of the Securities Act. These purchasers had adequate access, through their relationships with us, to information about us.

ITEM 16. EXHIBITS

(a) Exhibits

<table>
<thead>
<tr>
<th>Exhibit Number</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>3.01</td>
<td>Restated Certificate of Incorporation</td>
</tr>
<tr>
<td>3.02</td>
<td>Certificate of Amendment of the Restated Certificate of Incorporation dated May 9, 2013</td>
</tr>
<tr>
<td>3.03</td>
<td>Certificate of Amendment of the Restated Certificate of Incorporation dated May 12, 2014</td>
</tr>
<tr>
<td>3.04</td>
<td>Certificate of Amendment of the Restated Certificate of Incorporation dated September 18, 2015</td>
</tr>
<tr>
<td>3.05</td>
<td>Certificate of Amendment of the Restated Certificate of Incorporation dated May 18, 2016</td>
</tr>
<tr>
<td>3.06</td>
<td>Form of Certificate of Designation of Preferences, Rights and Limitations of Series A 17.38% Convertible Preferred Stock (found at Exhibit A-1, herein)</td>
</tr>
<tr>
<td>3.07</td>
<td>Form of Certificate of Designation of Preferences, Rights and Limitations of Series B 17.38% Convertible Preferred Stock (found at Exhibit A-2, herein)</td>
</tr>
<tr>
<td>3.08</td>
<td>Form of Certificate of Designation of Preferences, Rights and Limitations of Series C Convertible Preferred Stock (found at Exhibit A-3, herein)</td>
</tr>
<tr>
<td>3.09</td>
<td>Certificate of Amendment of the Restated Certificate of Incorporation dated June 5, 2017</td>
</tr>
<tr>
<td>3.10</td>
<td>Form of Certificate of Designation of Preferences, Rights and Limitations of Series D Convertible Preferred Stock (found at Exhibit E, herein)</td>
</tr>
<tr>
<td>3.11</td>
<td>Certificate of Amendment of the Certificate of Designation of Preferences, Rights and Limitations of Series B 17.38% Convertible Preferred Stock</td>
</tr>
<tr>
<td>3.12</td>
<td>Restated Bylaws</td>
</tr>
<tr>
<td>4.01</td>
<td>Specimen of Common Stock Certificate</td>
</tr>
<tr>
<td>4.02</td>
<td>Amended and Restated Letter Agreement, dated May 8, 2014, among registrant and the purchasers listed therein*</td>
</tr>
<tr>
<td>4.03</td>
<td>Letter Agreement, dated July 29, 2015, among registrant and registrant’s security holders listed therein</td>
</tr>
<tr>
<td>4.04(a)</td>
<td>Warrant to Purchase Stock issued July 29, 2015 by registrant to Total Energies Nouvelles Activités USA</td>
</tr>
<tr>
<td>4.05</td>
<td>Registration Rights Agreement, dated October 20, 2015, among registrant and registrant’s security holders listed therein</td>
</tr>
<tr>
<td>Exhibit Number</td>
<td>Description</td>
</tr>
<tr>
<td>----------------</td>
<td>-------------</td>
</tr>
<tr>
<td>4.06</td>
<td>Warrant to Purchase Stock issued February 12, 2016 by registrant to Foris Ventures, LLC</td>
</tr>
<tr>
<td>4.07</td>
<td>Warrant to Purchase Stock issued November 16, 2016 by the registrant to Nenter &amp; Co., Inc.</td>
</tr>
<tr>
<td>4.08</td>
<td>Form of Securities Purchase Agreement, dated May 8, 2017, among registrant and the investors named therein</td>
</tr>
<tr>
<td>4.09</td>
<td>Form of Common Stock Purchase Warrant (Cash Warrant) issued May 11, 2017 by registrant to the purchasers thereof (found at Exhibit C-1, herein)</td>
</tr>
<tr>
<td>4.10</td>
<td>Form of Common Stock Purchase Warrant (Dilution Warrant) issued May 11, 2017 by registrant to the purchasers thereof (found at Exhibit C-2, herein)</td>
</tr>
<tr>
<td>4.11</td>
<td>Securities Purchase Agreement, dated May 31, 2017, between registrant and the investor named therein</td>
</tr>
<tr>
<td>4.12</td>
<td>Securities Purchase Agreement, dated August 2, 2017, between registrant and DSM International B.V.</td>
</tr>
<tr>
<td>4.13</td>
<td>Form of Stockholder Agreement, dated August 3, 2017, between registrant and affiliates of Vivo Capital LLC (found at Exhibit C, herein)</td>
</tr>
<tr>
<td>4.14</td>
<td>Form of Common Stock Purchase Warrant (Cash Warrant) issued August 7, 2017 by registrant to DSM International B.V. (found at Exhibit B-1, herein)</td>
</tr>
<tr>
<td>4.15</td>
<td>Form of Common Stock Purchase Warrant (Dilution Warrant) issued August 7, 2017 by registrant to DSM International B.V. (found at Exhibit B-2, herein)</td>
</tr>
<tr>
<td>4.16</td>
<td>Amended and Restated Stockholder Agreement, dated August 7, 2017, between registrant and DSM International B.V.*</td>
</tr>
<tr>
<td>4.17</td>
<td>Common Stock Purchase Warrant issued August 17, 2018 by registrant to Foris Ventures, LLC</td>
</tr>
<tr>
<td>4.18</td>
<td>Common Stock Purchase Warrant issued August 17, 2018 by registrant to Vivo Capital Fund VIII, L.P.</td>
</tr>
<tr>
<td>4.19</td>
<td>Common Stock Purchase Warrant issued August 17, 2018 by registrant to Vivo Capital Surplus Fund VIII, L.P.</td>
</tr>
<tr>
<td>4.20</td>
<td>Common Stock Purchase Warrant issued August 20, 2018 by registrant to Vivo Capital Fund VIII, L.P.</td>
</tr>
<tr>
<td>4.21</td>
<td>Common Stock Purchase Warrant issued August 20, 2018 by registrant to Vivo Capital Surplus Fund VIII, L.P.</td>
</tr>
<tr>
<td>4.22</td>
<td>Securities Purchase Agreement, dated November 19, 2018, between the registrant and DSM International B.V.</td>
</tr>
<tr>
<td>4.23</td>
<td>Form of Registration Rights Agreement, dated December 10, 2018, among registrant and the investors party thereto</td>
</tr>
<tr>
<td>4.24</td>
<td>Common Stock Purchase Warrant issued April 16, 2019 by registrant to Foris Ventures, LLC</td>
</tr>
<tr>
<td>4.25</td>
<td>Security Purchase Agreement, dated April 24, 2019, between registrant and ETP BioHealth (I) Fund LP</td>
</tr>
<tr>
<td>4.26</td>
<td>Form of Common Stock Purchase Warrant issued April 26, April 29 or May 3, 2019 by registrant to certain accredited investors (found at Exhibit A, herein)</td>
</tr>
<tr>
<td>4.27</td>
<td>Common Stock Purchase Warrant issued May 10, 2019 by registrant to LMAP KAPPA Limited</td>
</tr>
<tr>
<td>4.28</td>
<td>Common Stock Purchase Warrant issued May 10, 2019 by registrant to Silverback Opportunistic Credit Master Fund Limited</td>
</tr>
</tbody>
</table>

II-7
<table>
<thead>
<tr>
<th>Exhibit Number</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>4.29</td>
<td>Warrant to Purchase Common Stock issued May 14, 2019 by registrant to Foris Ventures, LLC</td>
</tr>
<tr>
<td>4.30</td>
<td>Form of Common Stock Purchase Warrant issued June 24, 2019 by registrant to B. Riley FBR, Inc. (found at Exhibit B, herein)</td>
</tr>
<tr>
<td>4.31</td>
<td>Form of Common Stock Purchase Warrant issued July 8, 2019 by registrant to Wolverine Flagship Fund Trading Limited (found at Exhibit A, herein)</td>
</tr>
<tr>
<td>4.32</td>
<td>Warrant Amendment Agreement, dated July 10, 2019, between registrant and Foris Ventures, LLC</td>
</tr>
<tr>
<td>4.33</td>
<td>Form of Common Stock Purchase Warrant issued June 24, 2019 by registrant to CVI Investments, Inc. (found at Exhibit B, herein)</td>
</tr>
<tr>
<td>4.34</td>
<td>Common Stock Purchase Warrant issued August 14, 2019 by registrant to Naxyris S.A.</td>
</tr>
<tr>
<td>4.35</td>
<td>Common Stock Purchase Warrant issued August 14, 2019 by registrant to Foris Ventures, LLC</td>
</tr>
<tr>
<td>4.36</td>
<td>Common Stock Purchase Warrant issued August 28, 2019 by registrant to Foris Ventures, LLC</td>
</tr>
<tr>
<td>4.37</td>
<td>Warrant Amendment Agreement, dated August 28, 2019, between registrant and Foris Ventures, LLC</td>
</tr>
<tr>
<td>4.38</td>
<td>Warrant Amendment Agreement, dated August 28, 2019, between registrant and Foris Ventures, LLC</td>
</tr>
<tr>
<td>4.39</td>
<td>Form of Common Stock Purchase Warrant issued September 10, 2019 by registrant to certain accredited investors</td>
</tr>
<tr>
<td>4.40</td>
<td>Common Stock Purchase Warrant issued October 11, 2019 by registrant to Foris Ventures, LLC</td>
</tr>
<tr>
<td>4.41</td>
<td>Common Stock Purchase Warrant issued October 28, 2019 by registrant to Naxyris S.A.</td>
</tr>
<tr>
<td>5.01</td>
<td>Opinion of Fenwick &amp; West LLP regarding the Shares</td>
</tr>
<tr>
<td>10.01</td>
<td>Form of Indemnity Agreement between registrant and its directors and executive officers</td>
</tr>
<tr>
<td>23.01</td>
<td>Consent of Macias Gini &amp; O’Connell LLP, independent registered public accounting firm</td>
</tr>
<tr>
<td>23.02</td>
<td>Consent of BDO USA, LLP, independent registered public accounting firm</td>
</tr>
<tr>
<td>23.03</td>
<td>Consent of Fenwick &amp; West LLP (included in Exhibit 5.01)</td>
</tr>
<tr>
<td>24.01</td>
<td>Power of Attorney</td>
</tr>
</tbody>
</table>

* Portions of this exhibit, which have been granted confidential treatment by the Securities and Exchange Commission, have been omitted.

(a) Registrant issued substantially identical warrants to the purchasers under that certain Securities Purchase Agreement entered into on July 24, 2015. Registrant has filed the warrant issued to Total Energies Nouvelles Activites USA and has included with such exhibit a schedule (Schedule A to Exhibit 4.04) identifying each of the warrants and setting forth the material details in which the other warrants differ from the filed warrant (i.e., the names of the purchasers, the certificate numbers and the respective numbers of shares underlying the warrants).

(b) Financial statement schedules

Schedules not listed above have been omitted because the information required to be set forth therein is not applicable or is shown in the consolidated financial statements or notes thereto.
ITEM 17.  UNDERTAKINGS

(a) The undersigned registrant hereby undertakes:

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

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

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

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

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

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

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

(4) That, for the purpose of determining liability under the Securities Act of 1933, as amended, to any purchaser, each prospectus filed pursuant to Rule 424(b) as part of a registration statement relating to an offering, other than registration statements relying on Rule 430B or other than prospectuses filed in reliance on Rule 430A, shall be deemed to be part of and included in the registration statement as of the date it is first used after effectiveness. Provided, however, that no statement made in a registration statement or prospectus that is part of the registration statement or made in a document incorporated or deemed incorporated by reference into the registration statement or prospectus that is part of the registration statement will, as to a purchaser with a time of contract of sale prior to such first use, supersede or modify any statement that was made in the registration statement or prospectus that was part of the registration statement or made in any such document immediately prior to such date of first use.

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

II-9
(c) Insofar as indemnification for liabilities arising under the Securities Act of 1933 may be permitted to directors, officers and controlling persons of the registrant pursuant to the foregoing provisions, or otherwise, the registrant has been advised that in the opinion of the Securities and Exchange Commission such indemnification is against public policy as expressed in the Securities Act of 1933 and is therefore unenforceable. In the event that a claim for indemnification against such liabilities (other than the payment by the registrant of expenses incurred or paid by a director, officer or controlling person of the registrant in the successful defense of any action, suit or proceeding) is asserted by such director, officer or controlling person in connection with the securities being registered, the registrant will, unless in the opinion of its counsel the matter has been settled by controlling precedent, submit to a court of appropriate jurisdiction the question whether such indemnification by it is against public policy as expressed in the Securities Act of 1933 and will be governed by the final adjudication of such issue.
SIGNATURES

Pursuant to the requirements of the Securities Act of 1933, the registrant certifies that it has reasonable grounds to believe that it meets all of the requirements for filing on Form S-1 and has duly caused this registration statement to be signed on its behalf by the undersigned, thereunto duly authorized, in the City of Emeryville, State of California, on this 12th day of November, 2019.

AMYRIS, INC.

By: /s/ JOHN MELO
John Melo
President and Chief Executive Officer

POWER OF ATTORNEY

KNOW ALL PERSONS BY THESE PRESENTS, that each person whose signature appears below hereby constitutes and appoints John Melo, Jonathan Wolter and Nicole Kelsey, and each of them, as his or her true and lawful attorney-in-fact and agent with full power of substitution, for him or her in any and all capacities, to sign any and all amendments to this registration statement (including post-effective amendments or any abbreviated registration statement and any amendments thereto filed pursuant to Rule 462(b) increasing the number of securities for which registration is sought), and to file the same, with all exhibits thereto and other documents in connection therewith, with the Securities and Exchange Commission, granting unto said attorney-in-fact and agent full power and authority to do and perform each and every act and thing requisite and necessary to be done in connection therewith, as fully for all intents and purposes as he or she might or could do in person, hereby ratifying and confirming all that said attorney-in-fact and agent, or his or her substitute, may lawfully do or cause to be done by virtue hereof.

Pursuant to the requirements of the Securities Act of 1933, this registration statement has been signed by the following persons in the capacities and on the dates indicated.

<table>
<thead>
<tr>
<th>Signature</th>
<th>Title</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>/s/ JOHN MELO</td>
<td>Director, President and Chief Executive Officer (Principal Executive Officer)</td>
<td>November 12, 2019</td>
</tr>
<tr>
<td>/s/ JONATHAN WOLTER</td>
<td>Interim Chief Financial Officer (Principal Financial Officer)</td>
<td>November 12, 2019</td>
</tr>
<tr>
<td>/s/ ANTHONY HUGHES</td>
<td>Chief Accounting Officer (Principal Accounting Officer)</td>
<td>November 12, 2019</td>
</tr>
<tr>
<td>/s/ JOHN DOERR</td>
<td>Director</td>
<td>November 12, 2019</td>
</tr>
<tr>
<td>/s/ GEOFFREY DUYK</td>
<td>Director</td>
<td>November 12, 2019</td>
</tr>
<tr>
<td>/s/ PHILIP EYKERMANN</td>
<td>Director</td>
<td>November 12, 2019</td>
</tr>
<tr>
<td>/s/ CHRISTOPH GOPPELSROEDER</td>
<td>Director</td>
<td>November 12, 2019</td>
</tr>
</tbody>
</table>

Christoph Goppelsroeder
<table>
<thead>
<tr>
<th>Signature</th>
<th>Title</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>/s/ FRANK KUNG</td>
<td>Director</td>
<td>November 12, 2019</td>
</tr>
<tr>
<td></td>
<td>Frank Kung</td>
<td></td>
</tr>
<tr>
<td>/s/ STEVEN MILLS</td>
<td>Director</td>
<td>November 12, 2019</td>
</tr>
<tr>
<td></td>
<td>Steven Mills</td>
<td></td>
</tr>
<tr>
<td>/s/ R. NEIL WILLIAMS</td>
<td>Director</td>
<td>November 12, 2019</td>
</tr>
<tr>
<td></td>
<td>R. Neil Williams</td>
<td></td>
</tr>
</tbody>
</table>
This Security Purchase Agreement (this “Agreement”) is made as of April 24, 2019 (the “Effective Date”) by and between Amyris, Inc., a Delaware corporation (the “Company”), and ETP BioHealth (I) Fund LP (“Purchaser”).

1. Issuance of Securities. Effective as the Effective Date, the Company will issue and sell to Purchaser (i) 2,487,562 shares (the “Shares”) of the Company’s Common Stock, $0.0001 par value per share (the “Common Stock”) and (ii) a warrant in the form attached hereto as Exhibit A (the “Warrant”), registered in the name of the Purchaser, to purchase up to 1,990,049 shares of the Company’s Common Stock, with an exercise price per share equal to $5.02, subject to adjustment therein (the “Warrant Shares” and, together with the Shares and the Warrant, the “Securities”). Purchaser will purchase the Shares at a price of $4.02 per Share in cash. The total purchase price payable by the Purchaser for the Securities is $10,000,000 (the “Total Purchase Price”).

2. Closing and Delivery.

   (a) Closing. The closings (each, a “Closing”) of the transactions contemplated hereby shall be held at the offices of Fenwick & West LLP, 801 California Street, Mountain View, California 94041 on one or more dates, with the first such date within two Business Days of the date of this Agreement (such date, the “Initial Closing Date”), or at such other time and place as the Company and the Purchaser mutually agree upon and any subsequent closing date at at such other time and place as the Company and the Purchaser mutually agree upon (such date the “Subsequent Closing Date”). “Business Day” shall mean any day except any Saturday, any Sunday, any day which is a federal legal holiday in the United States or any day on which banking institutions in the State of New York are authorized or required by law or other governmental action to close.

   (b) Delivery. At each Closing, the Company shall execute and deliver to the Purchaser a Warrant for the applicable portion of Warrant Shares to be purchased by the Purchaser on such Closing Date and the Purchaser shall pay the Company the applicable portion of the Total Purchase Price in immediately available funds; provided that the Purchaser shall deliver at least 50% of the Total Purchase Price at the Initial Closing Date. Promptly following each Closing, the Company shall deliver to the Purchaser a single stock certificate representing the number of Shares purchased by the Purchaser at such Closing, such stock certificate to be registered in the name of the Purchaser, or in such nominee’s or nominees’ name(s) as designated by the Purchaser in writing, against payment of the purchase price therefor by wire transfer of immediately available funds to such account or accounts as the Company shall designate in writing to Purchaser.
3. **Company Representations.** The Company represents and warrants to Purchaser as follows:

(a) **Organization and Standing.** The Company is duly incorporated, validly existing, and in good standing under the laws of the State of Delaware. The Company has all requisite power and authority to own and operate its properties and assets and to carry on its business as presently conducted and as proposed to be conducted. The Company is qualified to do business as a foreign entity in every jurisdiction in which the failure to be so qualified would have, or would reasonably be expected to have, a material adverse effect, individually or in the aggregate, upon the business, properties, tangible and intangible assets, liabilities, operations, prospects, financial condition or results of operation of the Company or the ability of the Company to perform its obligations under the Transaction Agreements (a “**Material Adverse Effect**”).

(b) **Power.** The Company has all requisite power to execute and deliver this Agreement, to sell and issue the Securities hereunder, and to carry out and perform its obligations under the terms of this Agreement and the Warrant (the “**Transaction Agreements**”).

(c) **Authorization.** The execution, delivery, and performance of the Transaction Agreements by the Company has been duly authorized by all requisite action on the part of the Company and its officers, directors and stockholders, and this Agreement constitutes the legal, valid, and binding obligation of the Company enforceable in accordance with its terms, except (a) as limited by applicable bankruptcy, insolvency, reorganization, moratorium, and other laws of general application affecting enforcement of creditors’ rights generally, and (b) as limited by laws relating to the availability of specific performance, injunctive relief or other equitable remedies (the “**Enforceability Exceptions**”).

(d) **Consents and Approvals.** Except for any Current Report on Form 8-K or Notice of Exempt Offering of Securities on Form D to be filed by the Company in connection with the transaction contemplated hereby, the Company is not required to give any notice to, make any filing with, or obtain any authorization, consent, or approval of any government or governmental agency in order to consummate the transaction contemplated by the Transaction Agreements. Assuming the accuracy of the representations of the Purchaser in Section 4, no consent, approval, authorization or other order of, or registration, qualification or filing with, any court, regulatory body, administrative agency, self-regulatory organization, stock exchange or market (including The Nasdaq Stock Market), or other governmental body is required for the execution and delivery of the Transaction Agreements, the valid issuance, sale and delivery of the Securities to be sold pursuant to this Agreement other than such as have been or will be made or obtained, or for any securities filings required to be made under federal or state securities laws applicable to the offering of the Securities.

(e) **Non-Contravention.** Except as disclosed in Schedule 3(e), the execution and delivery of the Transaction Agreements, the issuance, sale and delivery of the Securities to be sold by the Company under this Agreement, the performance by the Company of its obligations under the Transaction Agreements and/or the consummation of the transaction contemplated hereby will not (a) conflict with, result in the breach or violation of, or constitute (with or without the giving of notice or the passage of time or both) a violation of, or default under, (i) any bond, debenture, note or other evidence of indebtedness, or under any lease, license, franchise, permit, indenture, mortgage, deed of trust, loan agreement, joint venture or other agreement or instrument to which the Company or any subsidiary is a party or by which it
or its properties may be bound or affected, (ii) the Company’s Restated Certificate of Incorporation, as amended and as in effect on the date hereof, the Company’s Bylaws, as amended and as in effect on the date hereof, or the equivalent document with respect to any subsidiary, as amended and as in effect on the date hereof, or (iii) any statute or law, judgment, decree, rule, regulation, ordinance or order of any court or governmental or regulatory body (including The Nasdaq Stock Market), governmental agency, arbitration panel or authority applicable to the Company, any of its subsidiaries or their respective properties, except in the case of clauses (i) and (iii) for such conflicts, breaches, violations or defaults that would not be likely to have, individually or in the aggregate, a Material Adverse Effect, or (b) result in the creation or imposition of any lien, encumbrance, claim, security interest or restriction whatsoever upon any of the material properties or assets of the Company or any of its subsidiaries or an acceleration of indebtedness pursuant to any obligation, agreement or condition contained in any material bond, debenture, note or any other evidence of indebtedness or any material indenture, mortgage, deed of trust or any other agreement or instrument to which the Company or any if its subsidiaries is a party or by which the Company or any of its subsidiaries is bound or to which any of the property or assets of the Company is subject. For purposes of this Section 3(e), the term “material” shall apply to agreements, understandings, instruments, contracts or proposed transactions to which the Company is a party or by which it is bound involving obligations (contingent or otherwise) of, or payments to, the Company in excess of $100,000 in a 12-month period.

(f) Shares. The Shares are duly authorized and when issued pursuant to the terms of this Agreement will be validly issued, fully paid, and nonassessable, and will be free of any liens or encumbrances with respect to the issuance thereof; provided, however, that the Shares shall be subject to restrictions on transfer under state or federal securities laws as set forth in this Agreement, or as otherwise may be required under state or federal securities laws as set forth in this Agreement at the time a transfer is proposed. Except as disclosed in Schedule 3(f), the issuance and delivery of the Shares is not subject to preemptive, co-sale, right of first refusal or any other similar rights of the stockholders of the Company or any other person, or any liens or encumbrances or result in the triggering of any anti-dilution or other similar rights under any outstanding securities of the Company.

(g) Authorization of the Warrants. The Warrants have been duly authorized by the Company and, when duly executed and delivered by the Company, will constitute a valid and binding agreement of the Company, enforceable against the Company in accordance with its terms, subject to the Enforceability Exceptions.

(h) Authorization of the Warrant Shares. The Warrant Shares issuable upon exercise of the Warrants have been duly authorized and reserved for issuance upon exercise by all necessary corporate action and such shares, when issued upon such exercise in accordance of the terms of the Warrants, will be validly issued and will be fully paid and non-assessable, and will be free of any liens or encumbrances with respect to the issuance thereof; provided, however, that the Warrant Shares shall be subject to restrictions on transfer under state or federal securities laws as set forth in this Agreement, or as otherwise may be required under state or federal securities laws as set forth in this Agreement at the time a transfer is proposed. Except as disclosed in Schedule 3(f), the issuance and delivery of the Warrant Shares is not subject to preemptive, co-sale, right of first refusal, or any other similar rights of the stockholders of the Company or any other Person, or any liens or encumbrances or result in the triggering of any anti-dilution or other similar rights under any outstanding securities of the Company.
4. **Investment Representations.** In connection with the receipt of the Securities pursuant to this Agreement, Purchaser represents to the Company the following:

(a) The execution, delivery and performance by Purchaser of this Agreement do not and will not contravene or constitute a default under, or violation of, or be subject to penalties under, (i) any agreement (or require the consent of any party under any such agreement that has not been made or obtained) to which Purchaser is a party, or (ii) any judgment, injunction, order, decree or other instrument binding upon Purchaser, except where such contravention, default, violation or failure to obtain a consent, individually or in the aggregate, would not reasonably be expected to impair Purchaser’s ability to perform fully any obligation which Purchaser has or will have under this Agreement.

(b) Purchaser understands the definition of the term “accredited investor” within the meaning of Regulation D, Rule 501(a), promulgated by the SEC under the Securities Act of 1933, as amended (the “Securities Act”), and qualifies as an accredited investor.

(c) Purchaser is aware of the Company’s business affairs and financial condition and has acquired sufficient information about the Company to reach an informed and knowledgeable decision to acquire the Securities. Purchaser is acquiring the Securities for its own account only and not with a view to, or for resale in connection with, any “distribution” thereof within the meaning of the Securities Act or under any applicable provision of state law. Purchaser does not have any present intention to transfer the Securities to any other person or entity in such a “distribution.”

(d) Purchaser understands that the Securities have not been registered under the Securities Act by reason of a specific exemption therefrom, which exemption depends upon, among other things, the bona fide nature of Purchaser’s investment intent as expressed herein.

(e) Purchaser understands that the Securities are “restricted securities” under applicable U.S. federal and state securities laws and that, pursuant to these laws, Purchaser must hold the Securities indefinitely unless they are registered with the SEC and qualified by state authorities, or an exemption from such registration and qualification requirements is available. Purchaser acknowledges that the Company has no obligation to register or qualify the Securities for resale.

(f) By reason of his business and financial experience, Purchaser has the ability to protect her own interests in connection with the purchase of the Securities.
5. **Restrictive Legends and Stop-Transfer Orders.**

The certificate or certificates representing the Securities shall bear such legends as the Company deems to be required for the purpose of compliance with applicable Federal or state securities laws or as otherwise required by law.

6. **Beneficial Ownership Limitation.**

The Company shall not effect any exercise or conversion of any Company security, and the Purchaser shall not have the right to exercise or convert any portion of any Company security, to the extent that after giving effect to such issuance after exercise or conversion, the Purchaser (together with the Purchaser’s affiliates, and any other persons acting as a group together with the Purchaser or any of the Purchaser’s affiliates (such Persons, "Attribution Parties"), would beneficially own in excess of the Beneficial Ownership Limitation (as defined below); provided, that the Beneficial Ownership Limitation shall not apply in the event that the Company obtains stockholder approval for issuances of shares of Common Stock in excess of the Beneficial Ownership Limitation and otherwise satisfies the requirements of Nasdaq Stock Market Rule 5635. For purposes of the foregoing sentence, the number of shares of Common Stock beneficially owned by the Purchaser and Attribution Parties shall include the number of shares of Common Stock issuable upon exercise or conversion of the Company security with respect to which such determination is being made, but shall exclude the number of shares of Common Stock which would be issuable upon (i) exercise or conversion of the remaining, nonexercised or nonconverted portion of the Company security to which such determination is being made that is beneficially owned by the Purchaser or any of its Attribution Parties and (ii) exercise or conversion of the unexercised or nonconverted portion of any other securities of the Company subject to a limitation on conversion or exercise analogous to the limitation contained herein beneficially owned by the Purchaser or any of its Attribution Parties. Except as set forth in the preceding sentence, beneficial ownership shall be calculated in accordance with Section 13(d) of the Securities and Exchange Act of 1934, as amended (the "Exchange Act") and the rules and regulations promulgated thereunder, it being acknowledged by the Purchaser that the Purchaser is solely responsible for any schedules required to be filed in accordance therewith. In addition, a determination as to any group status as contemplated above shall be determined in accordance with Section 13(d) of the Exchange Act and the rules and regulations promulgated thereunder. For purposes of this Section 6, in determining the number of outstanding shares of Common Stock, the Purchaser may rely on the number of outstanding shares of Common Stock as reflected in (A) the Company’s most recent periodic or annual report filed with the U.S. Securities and Exchange Commission, as the case may be, (B) a more recent public announcement by the Company or (C) a more recent written notice by the Company or the Company’s transfer agent setting forth the number of shares of Common Stock outstanding. Upon the written or oral request of the Purchaser, the Company shall within two trading days confirm orally and in writing to the Purchaser the number of shares of Common Stock then outstanding. In any case, the number of outstanding shares of Common Stock shall be determined after giving effect to the conversion or exercise of securities of the Company by the Purchaser or its Attribution Parties since the date as of which such number of outstanding shares of Common Stock was reported. The "Beneficial Ownership Limitation" shall be 19.99% of the number of shares of the Common Stock outstanding.
7. **Registration Rights.**

(a) **Registration Statement.** As soon as practicable, the Company shall file a registration statement on Form S-3 (or other appropriate form if the Company is not then S-3 eligible) providing for the resale by the Purchaser of the Shares and the Warrant Shares. The Company shall use commercially reasonable efforts to cause such registration to become effective within 60 days following the date hereof and commercially reasonable efforts to keep such registration statement effective at all times until (i) the Purchaser owns no Securities or (ii) the Securities are eligible for resale under Rule 144 without regard to volume limitations.

(b) **Company Registration.** If at any time or from time to time the Company shall determine to register any of its equity securities, either for its own account or for the account of security holders (other than (1) in a registration relating solely to employee benefit plans, (2) a registration on Form S-4 or S-8 (or such other similar successor forms then in effect under the Securities Act), (3) a registration pursuant to which the Company is offering to exchange its own securities, or (4) a registration statement relating solely to dividend reinvestment or similar plans), the Company will:

(i) promptly (but in no event less than 10 days before the effective date of the relevant Registration Statement) give to the Holder written notice thereof; and

(ii) include in such registration (and any related qualification under state securities laws or other compliance), and in any underwriting involved therein, all the Registrable Securities specified in a written request or requests, made within 5 days after receipt of such written notice from the Company, by the Holder, except as set forth in Section 7.c below

(c) **Underwriting.** If the registration of which the Company gives notice is for a registered public offering involving an underwriting, the Company shall so advise the Holder as a part of the written notice given pursuant to Section 7.b(i). In such event the right of any Holder to registration pursuant to this Section 7 shall be conditioned upon such Holder’s participation in such underwriting and the inclusion of such Holder’s Registrable Securities in the underwriting to the extent provided herein. All Holders proposing to distribute their Registrable Securities through such underwriting shall, together with the Company and the other parties distributing their securities through such underwriting, enter into an underwriting agreement in customary form with the underwriter or underwriters selected for such underwriting by the Company. Notwithstanding any other provision of this Section 7, if the underwriter determines that marketing factors require a limitation of the number of shares to be underwritten, the underwriter may limit the number of Registrable Securities to be included in the registration and underwriting, subject to the terms of this Section 7. The Company shall so advise all holders of the Company’s securities that would otherwise be registered and underwritten pursuant hereto, and the number of shares of such securities, including Registrable Securities, that may be included in the registration and underwriting shall be allocated first to the Company and second to the Holders and any other holders with registration rights on a pro rata basis based on the total number of Registrable Securities held by the Holders and such other holders. No such reduction shall (i) reduce the securities being offered by the Company for its own account to be included in the registration and underwriting, or (ii) reduce the amount of securities of the selling holders included in the registration below twenty-five percent (25%) of the total amount of securities included in such registration by all selling stockholders. No securities excluded from the underwriting by reason of the underwriter’s marketing limitation shall be included in such registration. For the avoidance of doubt, nothing in this Section 7.c is intended to diminish the number of securities to be included by the Company in the underwriting.
 Registrable Securities. For purpose of this Section 7, “Registrable Securities” means (i) the Shares and the Warrant Shares held by, or issuable to, the Holder and (ii) any shares of voting securities issued as (or issuable upon) a stock split, stock dividend or other distribution with respect to, or in exchange or in replacement of, such Registrable Securities set forth in clause (i), in each case, until the earliest to occur of (A) the date on which a registration statement covering such securities has been declared effective by the SEC and such security has been disposed of pursuant to such effective registration statement, (B) the date on which such security is sold pursuant to Rule 144, (C) the date on which such security ceases to be outstanding or (D) the date on which the Holder thereof, together with its affiliates, is able to dispose of all of its Registrable Securities in any 90 day period pursuant to Rule 144 (or any similar or analogous rule promulgated under the Securities Act).

8. Fees and Expenses. The Company shall pay the reasonable fees and expenses of Purchaser in connection with the transactions contemplated hereby.


(a) This Agreement and all acts and transactions pursuant hereto and the rights and obligations of the parties hereto shall be governed, construed and interpreted in accordance with the laws of the State of California, without giving effect to principles of conflicts of law.

(b) This Agreement may be executed in two counterparts, each of which shall be deemed an original and all of which together shall constitute one instrument.

(c) The rights and benefits of this Agreement shall inure to the benefit of, and be enforceable by the Company’s successors and assigns. The rights and obligations of Purchaser under this Agreement may only be assigned with the prior written consent of the Company.

[Signature Pages Follow]
The undersigned has executed this Agreement as of the date first set forth above.

THE COMPANY:
AMYRIS, INC.

By: /s/ Kathleen Valiasek

(Signature)
Name: Kathleen Valiasek
Title: Chief Financial Officer

Address:
5885 Hollis Street, Suite 100
Emeryville, CA 94608
Attention: General Counsel
Facsimile: (510) 899-0165

[Signature Page to Securities Purchase Agreement]
The undersigned has executed this Agreement as of the date first set forth above.

PURCHASER:

ETP BioHealth (I) Fund LP

Its General Partner, Emerging Technology Partners, LLC

/s/ James Hu  
(Signature)

Name: James Hu  
Title: Managing Director

Address:  4919 Rebel Ridge Dr.  
Sugarland, TX 77478

Attention: James Hu

[Signature Page to Securities Purchase Agreement]
NEITHER THIS SECURITY NOR THE SECURITIES INTO WHICH THIS SECURITY IS EXERCISABLE HAS BEEN REGISTERED WITH THE SECURITIES AND EXCHANGE COMMISSION OR THE SECURITIES COMMISSION OF ANY STATE IN RELIANCE UPON AN EXEMPTION FROM REGISTRATION UNDER THE SECURITIES ACT OF 1933, AS AMENDED (THE “SECURITIES ACT”), AND, ACCORDINGLY, MAY NOT BE OFFERED OR SOLD EXCEPT PURSUANT TO AN EFFECTIVE REGISTRATION STATEMENT UNDER THE SECURITIES ACT OR PURSUANT TO AN AVAILABLE EXEMPTION FROM, OR IN A TRANSACTION NOT SUBJECT TO, THE REGISTRATION REQUIREMENTS OF THE SECURITIES ACT AND IN ACCORDANCE WITH APPLICABLE STATE SECURITIES LAWS. THIS SECURITY AND THE SECURITIES ISSUABLE UPON EXERCISE OF THIS SECURITY MAY BE PLEDGED IN CONNECTION WITH A BONA FIDE MARGIN ACCOUNT WITH A REGISTERED BROKER-DEALER OR OTHER LOAN WITH A FINANCIAL INSTITUTION THAT IS AN “ACCREDITED INVESTOR” AS DEFINED IN RULE 501(a) UNDER THE SECURITIES ACT OR OTHER LOAN SECURED BY SUCH SECURITIES.

COMMON STOCK PURCHASE WARRANT

AMYRIS, INC.

Warrant Shares: 2,000,000
Issue Date: October 11, 2019

THIS COMMON STOCK PURCHASE WARRANT (the “Warrant”) certifies that, for value received, FORIS VENTURES, LLC or its assigns (the “Holder”) is entitled, upon the terms and subject to the limitations on exercise and the conditions hereinafter set forth, at any time on or after the date hereof (the “Initial Exercise Date”) and on or prior to the close of business on the two (2) year anniversary of the Initial Exercise Date (the “Termination Date”) but not thereafter, to subscribe for and purchase from Amyris, Inc., a Delaware corporation (the “Company”), up to TWO MILLION (2,000,000) shares (as subject to adjustment hereunder, the “Warrant Shares”) of the Company’s common stock, par value $0.0001 per share (the “Common Stock”). The purchase price of one share of Common Stock under this Warrant shall be equal to the Exercise Price, as defined in Section 2(b).

Section 1. Definitions. Capitalized terms used and not otherwise defined herein shall have the meanings set forth in that certain Loan and Security Agreement, dated June 29, 2018 (as amended or otherwise modified, the “Loan Agreement”), by and among the Company, certain of the Company’s Subsidiaries party thereto, and the Holder.

Section 2. Exercise.

a) Exercise of Warrant. Exercise of the purchase rights represented by this Warrant may be made, in whole or in part, at any time or times on or after the Initial Exercise Date and on or before the Termination Date by delivery to the Company of a duly executed facsimile copy or PDF copy submitted by electronic (or e-mail attachment) of the
Notice of Exercise in the form annexed hereto ("Notice of Exercise"). Within two (2) Trading Days following the date of exercise as aforesaid, the Holder shall deliver the aggregate Exercise Price for the shares specified in the applicable Notice of Exercise by wire transfer or cashier’s check drawn on a United States bank unless the cashless exercise procedure specified in Section 2(c) below is specified in the applicable Notice of Exercise. No ink-original Notice of Exercise shall be required, nor shall any medallion guarantee (or other type of guarantee or notarization) of any Notice of Exercise form be required. Notwithstanding anything herein to the contrary, the Holder shall not be required to physically surrender this Warrant to the Company until the Holder has purchased all of the Warrant Shares available hereunder and the Warrant has been exercised in full, in which case, the Holder shall surrender this Warrant to the Company for cancellation within three (3) Trading Days of the date the final Notice of Exercise is delivered to the Company. Partial exercises of this Warrant resulting in purchases of a portion of the total number of Warrant Shares available hereunder shall have the effect of lowering the outstanding number of Warrant Shares purchasable hereunder in an amount equal to the applicable number of Warrant Shares purchased. The Company shall maintain records showing the number of Warrant Shares purchased and the date of such purchases. The Company shall deliver any objection to any Notice of Exercise within one (1) Business Day of receipt of such notice. The Holder and any assignee, by acceptance of this Warrant, acknowledge and agree that, by reason of the provisions of this paragraph, following the purchase of a portion of the Warrant Shares hereunder, the number of Warrant Shares available for purchase hereunder at any given time may be less than the amount stated on the face hereof.

b) Exercise Price. The exercise price per share of the Common Stock under this Warrant shall be $2.87, subject to adjustment hereunder (the "Exercise Price").

c) Cashless Exercise. Notwithstanding anything contained herein to the contrary, if a registration statement covering the resale of the Warrant Shares subject to the applicable Notice of Exercise is not available for the resale of such Warrant Shares, at any time after the six month anniversary of the Initial Exercise Date, this Warrant may be exercised, in whole or in part, at any time or times on or after the Initial Exercise Date and on or before the Termination Date at the election of the Holder (in such Holder’s sole discretion) by means of a “cashless exercise” in which the Holder shall be entitled to receive a number of Warrant Shares equal to the quotient obtained by dividing 

\[(A-B) \times (X) \]

by (A), where:

\[(A) = \text{as applicable: (i) the VWAP on the Trading Day immediately preceding the date of the applicable Notice of Exercise if such Notice of Exercise is (1) both executed and delivered pursuant to Section 2(a) hereof on a day that is not a Trading Day or (2) both executed and delivered pursuant to Section 2(a) hereof on a Trading Day prior to the opening of "regular trading hours" (as defined in Rule 600(b)(64) of Regulation NMS promulgated under the federal securities laws) on such Trading Day, (ii) at the option of the Holder, either (y) the VWAP on the Trading Day immediately preceding the date of the applicable Notice of Exercise or (z) the Bid Price of the Common Stock on the principal Trading Market as reported by Bloomberg L.P. as of the time of} \]
the Holder’s execution of the applicable Notice of Exercise if such Notice of Exercise is executed during “regular trading hours” on a Trading Day and is delivered within two (2) hours thereafter (including until two (2) hours after the close of “regular trading hours” on a Trading Day) pursuant to Section 2(a) hereof or (iii) the VWAP on the date of the applicable Notice of Exercise if the date of such Notice of Exercise is a Trading Day and such Notice of Exercise is both executed and delivered pursuant to Section 2(a) hereof after the close of “regular trading hours” on such Trading Day;

(B) = the Exercise Price of this Warrant, as adjusted hereunder; and

(X) = the number of Warrant Shares that would be issuable upon exercise of this Warrant in accordance with the terms of this Warrant if such exercise were by means of a cash exercise rather than a cashless exercise.

If Warrant Shares are issued in such a cashless exercise, the parties acknowledge and agree that in accordance with Section 3(a)(9) of the Securities Act, the Warrant Shares shall take on the characteristics of the Warrants being exercised, and the holding period of the Warrant Shares being issued may be tacked on to the holding period of this Warrant. The Company agrees not to take any position contrary to this Section 2(c).

“Bid Price” means, for any date, the price determined by the first of the following clauses that applies: (a) if the Common Stock is then listed or quoted on a Trading Market, the bid price of the Common Stock for the time in question (or the nearest preceding date) on the Trading Market on which the Common Stock is then listed or quoted as reported by Bloomberg L.P. (based on a Trading Day from 9:30 a.m. (New York City time) to 4:02 p.m. (New York City time)), (b) if OTCQB or OTCQX is not a Trading Market, the volume weighted average price of the Common Stock for such date (or the nearest preceding date) on OTCQB or OTCQX as applicable, (c) if the Common Stock is not then listed or quoted for trading on OTCQB or OTCQX and if prices for the Common Stock are then reported in the “Pink Sheets” published by OTC Markets Group, Inc. (or a similar organization or agency succeeding to its functions of reporting prices), the most recent bid price per share of the Common Stock so reported, or (d) in all other cases, the fair market value of a share of Common Stock as determined by an independent appraiser selected in good faith by the Holder and reasonably acceptable to the Company, the fees and expenses of which shall be paid by the Company.

“Trading Day,” means, as applicable, (x) with respect to all price or trading volume determinations relating to the Common Stock, an day on which the Common Stock is traded on the Nasdaq Global Select Market, or, if the Nasdaq Global Select Market is not the principal trading market for the Common Stock, then on the principal securities exchange or securities market on which the Common Stock is then traded, provided that “Trading Day” shall not include any day on which the Common Stock is scheduled to trade on such exchange or market for less than 4.5 hours or any day that the Common Stock is suspended from trading during the final hour of trading on such exchange or market (or if such exchange or market does not designate in advance the closing time of trading on such
exchange or market, then during the hour ending at 4:00:00 p.m., New York time) unless such day is otherwise designated as a Trading Day in writing by the Holder or (y) with respect to all determinations other than price determinations relating to the Common Stock, any day on which The New York Stock Exchange (or any successor thereto) is open for trading of securities.

“VWAP” means, for any date, the price determined by the first of the following clauses that applies: (a) if the Common Stock is then listed or quoted on a Trading Market, the daily volume weighted average price of the Common Stock for such date (or the nearest preceding date) on the Trading Market on which the Common Stock is then listed or quoted as reported by Bloomberg L.P. (based on a Trading Day from 9:30 a.m. (New York City time) to 4:02 p.m. (New York City time)), (b) if OTCQB or OTCQX is not a Trading Market, the volume weighted average price of the Common Stock for such date (or the nearest preceding date) on OTCQB or OTCQX as applicable, (c) if the Common Stock is not then listed or quoted for trading on OTCQB or OTCQX and if prices for the Common Stock are then reported in the “Pink Sheets” published by OTC Markets Group, Inc. (or a similar organization or agency succeeding to its functions of reporting prices), the most recent bid price per share of the Common Stock so reported, or (d) in all other cases, the fair market value of a share of Common Stock as determined by an independent appraiser selected in good faith by the Holder and reasonably acceptable to the Company, the fees and expenses of which shall be paid by the Company.

Notwithstanding anything herein to the contrary, on the Termination Date, if a registration statement covering the resale of the Warrant Shares is not available for the resale of the Warrant Shares, this Warrant shall be automatically exercised via cashless exercise pursuant to this Section 2(c).

d) Mechanics of Exercise.

i. Delivery of Warrant Shares Upon Exercise. Warrant Shares purchased hereunder shall be transmitted by the Company’s stock transfer agent (the “Transfer Agent”) to the Holder by crediting the account of the Holder’s or its designee’s balance account with The Depository Trust Company through its Deposit or Withdrawal at Custodian system (“DWAC”) if the Company is then a participant in such system and either (A) there is an effective registration statement permitting the issuance of the Warrant Shares to or resale of the Warrant Shares by the Holder or (B) the Warrant Shares are eligible for resale by the Holder without volume or manner-of-sale limitations pursuant to Rule 144 under the Securities Act (“Rule 144”), and otherwise by physical delivery of a certificate, registered in the Company’s share register in the name of the Holder or its designee, for the number of Warrant Shares to which the Holder is entitled pursuant to such exercise to the address specified by the Holder in the Notice of Exercise by the date that is the earlier of (i) two (2) Trading Days after the delivery to the Company of the Notice of Exercise and (ii) one (1) Trading Day after delivery of the aggregate Exercise Price to the Company (such date, the “Warrant Share Delivery Date”). Upon delivery of the Notice of Exercise, the Holder shall be deemed
for all corporate purposes to have become the holder of record of the Warrant Shares with respect to which this Warrant has been exercised, irrespective of the date of delivery of the Warrant Shares, provided that payment of the aggregate Exercise Price (other than in the case of a cashless exercise) is received within two (2) Trading following delivery of the Notice of Exercise. The Company agrees to maintain a transfer agent that is a participant in the FAST program so long as this Warrant remains outstanding and exercisable.

ii. Delivery of New Warrants Upon Exercise. If this Warrant shall have been exercised in part, the Company shall, at the request of the Holder and upon surrender of this Warrant certificate, at the time of delivery of the Warrant Shares, deliver to the Holder a new Warrant evidencing the rights of the Holder to purchase the unpurchased Warrant Shares called for by this Warrant, which new Warrant shall in all other respects be identical with this Warrant.

iii. Rescission Rights. If the Company fails to cause the Transfer Agent to transmit to the Holder the Warrant Shares pursuant to Section 2(d)(i) by the Warrant Share Delivery Date, then the Holder will have the right to rescind such exercise.

iv. Compensation for Buy-In on Failure to Timely Deliver Warrant Shares Upon Exercise. In addition to any other rights available to the Holder, if the Company fails to cause the Transfer Agent to transmit to the Holder the Warrant Shares in accordance with the provisions of Section 2(d)(i) above pursuant to an exercise on or before the Warrant Share Delivery Date, and if after such date the Holder is required by its broker to purchase (in an open market transaction or otherwise) or the Holder’s brokerage firm otherwise purchases, shares of Common Stock to deliver in satisfaction of a sale by the Holder of the Warrant Shares which the Holder anticipated receiving upon such exercise (a “Buy-In”), then the Company shall (A) pay in cash to the Holder the amount, if any, by which (x) the Holder’s total purchase price (including brokerage commissions, if any) for the shares of Common Stock so purchased exceeds (y) the amount obtained by multiplying (1) the number of Warrant Shares that the Company was required to deliver to the Holder in connection with the exercise at issue times (2) the price at which the sell order giving rise to such purchase obligation was executed, and (B) at the option of the Holder, either reinstate the portion of the Warrant and equivalent number of Warrant Shares for which such exercise was not honored (in which case such exercise shall be deemed rescinded) or deliver to the Holder the number of shares of Common Stock that would have been issued had the Company timely complied with its exercise and delivery obligations hereunder. For example, if the Holder purchases Common Stock having a total purchase price of $11,000 to cover a Buy-In with respect to an attempted exercise of shares of Common Stock with an aggregate sale price giving rise to such purchase obligation of $10,000,
under clause (A) of the immediately preceding sentence the Company shall be required to pay the Holder $1,000. The Holder shall provide the Company written notice indicating the amounts payable to the Holder in respect of the Buy-In and, upon request of the Company, evidence of the amount of such loss. Nothing herein shall limit the Holder’s right to pursue any other remedies available to it hereunder, at law or in equity including, without limitation, a decree of specific performance and/or injunctive relief with respect to the Company’s failure to timely deliver shares of Common Stock upon exercise of the Warrant as required pursuant to the terms hereof.

v. **No Fractional Shares or Scrip**. No fractional shares or scrip representing fractional shares shall be issued upon the exercise of this Warrant. As to any fraction of a share which the Holder would otherwise be entitled to purchase upon such exercise, the Company shall, at its election, either pay a cash adjustment in respect of such final fraction in an amount equal to such fraction multiplied by the Exercise Price or round up to the next whole share.

vi. **Charges, Taxes and Expenses**. Issuance of Warrant Shares shall be made without charge to the Holder for any issue or transfer tax or other incidental expense in respect of the issuance of such Warrant Shares, all of which taxes and expenses shall be paid by the Company, and such Warrant Shares shall be issued in the name of the Holder or in such name or names as may be directed by the Holder; *provided, however,* that in the event that Warrant Shares are to be issued in a name other than the name of the Holder, this Warrant when surrendered for exercise shall be accompanied by the Assignment Form attached hereto duly executed by the Holder and the Company may require, as a condition thereto, the payment of a sum sufficient to reimburse it for any transfer tax incidental thereto. The Company shall pay all Transfer Agent fees required for same-day processing of any Notice of Exercise and all fees to the Depository Trust Company (or another established clearing corporation performing similar functions) required for same-day electronic delivery of the Warrant Shares.

vii. **Closing of Books**. The Company will not close its stockholder books or records in any manner which prevents the timely exercise of this Warrant, pursuant to the terms hereof.

e) **Holder’s Exercise Limitations**. Notwithstanding anything to the contrary contained herein, the Company shall not effect any exercise of this Warrant, and the Holder shall not have the right to exercise any portion of this Warrant, pursuant to Section 2 or otherwise, to the extent that after giving effect to such issuance after exercise as set forth on the applicable Notice of Exercise, the Holder (together with the Holder’s Affiliates, and any other Persons acting as a group together with the Holder or any of the Holder’s Affiliates (such Persons, “*Attribution Parties*”)), would beneficially own in excess of the
Beneficial Ownership Limitation (as defined below); provided, that the Beneficial Ownership Limitation shall not apply in the event that the Company obtains stockholder approval for issuances of shares of Common Stock in excess of the Beneficial Ownership Limitation and otherwise satisfies the requirements of Nasdaq Stock Market Rule 5635. For purposes of the foregoing sentence, the number of shares of Common Stock beneficially owned by the Holder and its Affiliates and Attribution Parties shall include the number of shares of Common Stock issuable upon exercise of this Warrant with respect to which such determination is being made, but shall exclude the number of shares of Common Stock which would be issuable upon (i) exercise of the remaining, nonexercised portion of this Warrant beneficially owned by the Holder or any of its Affiliates or Attribution Parties and (ii) exercise or conversion of the unexercised or nonconverted portion of any other securities of the Company subject to a limitation on conversion or exercise analogous to the limitation contained herein beneficially owned by the Holder or any of its Affiliates or Attribution Parties. Except as set forth in the preceding sentence, for purposes of this Section 2(e), beneficial ownership shall be calculated in accordance with Section 13(d) of the Securities Exchange Act of 1934 (the “Exchange Act”) and the rules and regulations promulgated thereunder, it being acknowledged by the Holder that the Company is not representing to the Holder that such calculation is in compliance with Section 13(d) of the Exchange Act and the Holder is solely responsible for any schedules required to be filed in accordance therewith. To the extent that the limitation contained in this Section 2(e) applies, the determination of whether this Warrant is exercisable (in relation to other securities owned by the Holder together with any Affiliates and Attribution Parties) and of which portion of this Warrant is exercisable shall be in the sole discretion of the Holder, and the submission of a Notice of Exercise shall be deemed to be the Holder’s determination of whether this Warrant is exercisable (in relation to other securities owned by the Holder together with any Affiliates and Attribution Parties) and of which portion of this Warrant is exercisable, in each case subject to the Beneficial Ownership Limitation, and the Company shall have no obligation to verify or confirm the accuracy of such determination. In addition, a determination as to any group status as contemplated above shall be determined in accordance with Section 13(d) of the Exchange Act and the rules and regulations promulgated thereunder. For purposes of this Section 2(e), in determining the number of outstanding shares of Common Stock, the Holder may rely on the number of outstanding shares of Common Stock as reflected in (A) the Company’s most recent periodic or annual report filed with the Commission, as the case may be, (B) a more recent public announcement by the Company or (C) a more recent written notice by the Company or the Transfer Agent setting forth the number of shares of Common Stock outstanding. Upon the written or oral request of the Holder, the Company shall within two Trading Days confirm orally and in writing to the Holder the number of shares of Common Stock then outstanding. In any case, the number of outstanding shares of Common Stock shall be determined after giving effect to the conversion or exercise of securities of the Company, including this Warrant, by the Holder or its Affiliates or Attribution Parties since the date as of which such number of outstanding shares of Common Stock was reported. The “Beneficial Ownership Limitation” shall be 19.99% of the number of shares of the Common Stock outstanding immediately after giving effect to the issuance of shares of Common Stock issuable upon exercise of this Warrant. The provisions of this paragraph shall be construed and implemented in a manner otherwise
than in strict conformity with the terms of this Section 2(e) to correct this paragraph (or any portion hereof) which may be defective or inconsistent with the intended Beneficial Ownership Limitation herein contained or to make changes or supplements necessary or desirable to properly give effect to such limitation. The limitations contained in this paragraph shall apply to a successor holder of this Warrant.

Section 3. Certain Adjustments.

a) Stock Dividends and Splits. If the Company, at any time while this Warrant is outstanding: (i) pays a stock dividend or otherwise makes a distribution or distributions on shares of its Common Stock or any other equity or equity equivalent securities payable in shares of Common Stock (which, for avoidance of doubt, shall not include any shares of Common Stock issued by the Company upon exercise of this Warrant), (ii) subdivides outstanding shares of Common Stock into a larger number of shares, (iii) combines (including by way of reverse stock split) outstanding shares of Common Stock into a smaller number of shares or (iv) issues by reclassification of shares of the Common Stock any shares of capital stock of the Company, then in each case the Exercise Price shall be multiplied by a fraction of which the numerator shall be the number of shares of Common Stock (excluding treasury shares, if any) outstanding immediately before such event and of which the denominator shall be the number of shares of Common Stock outstanding immediately after such event, and the number of shares issuable upon exercise of this Warrant shall be proportionately adjusted such that the aggregate Exercise Price of this Warrant shall remain unchanged. Any adjustment made pursuant to this Section 3(a) shall become effective immediately after the record date for the determination of stockholders entitled to receive such dividend or distribution and shall become effective immediately after the effective date in the case of a subdivision, combination or re-classification.

b) Subsequent Rights Offerings. In addition to any adjustments pursuant to Section 3(a) above, if at any time after the Original Issue Date the Company grants, issues or sells any Common Stock Equivalents or rights to purchase stock, warrants, securities or other property pro rata to the record holders of any class of shares of Common Stock (the "Purchase Rights"), then each Holder will be entitled to acquire, upon the terms applicable to such Purchase Rights, the aggregate Purchase Rights which the Holder could have acquired if the Holder had held the number of shares of Common Stock acquirable upon complete exercise of this Warrant (without regard to any limitations on exercise hereof) immediately before the date on which a record is taken for the grant, issuance or sale of such Purchase Rights, or, if no such record is taken, the date as of which the record holders of shares of Common Stock are to be determined for the grant, issue or sale of such Purchase Rights.
c) **Pro Rata Distributions.** During such time as this Warrant is outstanding, if the Company shall declare or make any dividend or other distribution of its assets (or rights to acquire its assets) to holders of shares of Common Stock, by way of return of capital or otherwise (including, without limitation, any distribution of cash, stock or other securities, property or options by way of a dividend, spin off, reclassification, corporate rearrangement, scheme of arrangement or other similar transaction, but excluding any dividend that results in adjustment to the Conversion Price pursuant to Section 3(a) above) (a “Distribution”), at any time after the issuance of this Warrant, then, in each such case, the Holder shall be entitled to participate in such Distribution to the same extent that the Holder would have participated therein if the Holder had held the number of shares of Common Stock acquirable upon complete exercise of this Warrant (without regard to any limitations on exercise hereof) immediately before the date of which a record is taken for such Distribution, or, if no such record is taken, the date as of which the record holders of shares of Common Stock are to be determined for the participation in such Distribution.

d) **Fundamental Transaction.** If, at any time while this Warrant is outstanding, (i) the Company, directly or indirectly, in one or more related transactions effects any merger or consolidation of the Company with or into another Person, (ii) the Company, directly or indirectly, effects any sale, lease, license, assignment, transfer, conveyance or other disposition of all or substantially all of its assets in one or a series of related transactions, (iii) any, direct or indirect, purchase offer, tender offer or exchange offer (whether by the Company or another Person) is completed pursuant to which holders of Common Stock are permitted to sell, tender or exchange their shares for other securities, cash or property and has been accepted by the holders of 50% or more of the outstanding Common Stock, (iv) the Company, directly or indirectly, in one or more related transactions effects any reclassification, reorganization or recapitalization of the Common Stock or any compulsory share exchange pursuant to which the Common Stock is effectively converted into or exchanged for other securities, cash or property, or (v) the Company, directly or indirectly, in one or more related transactions consummates a stock or share purchase agreement or other business combination (including, without limitation, a reorganization, recapitalization, spin-off or scheme of arrangement) with another Person or group of Persons whereby such other Person or group acquires more than 50% of the outstanding shares of Common Stock (not including any shares of Common Stock held by the other Person or other Persons making or party to, or associated or affiliated with the other Persons making or party to, such stock or share purchase agreement or other business combination) (each a “Fundamental Transaction”), then, the Holder shall have the right to receive, for each Warrant Share that would have been issuable upon such exercise immediately prior to the occurrence of such Fundamental Transaction (as if the exercise of the Warrant occurred immediately prior to the occurrence of such Fundamental Transaction), at the option of the Holder (without regard to any limitation in Section 2(e) on the exercise of this Warrant), the number of shares of common stock of the successor or acquiring corporation or shares of Common Stock of the Company, if it is the surviving corporation, and any additional consideration (the “Alternate Consideration”) receivable as a result of such Fundamental
Transaction by a holder of the number of shares of Common Stock for which this Warrant is exercisable immediately prior to such Fundamental Transaction (without regard to any limitation in Section 2(e) on the exercise of this Warrant). For purposes of any such exercise, the determination of the Exercise Price shall be appropriately adjusted to apply to such Alternate Consideration based on the amount of Alternate Consideration issuable in respect of one share of Common Stock in such Fundamental Transaction, and the Company shall apportion the Exercise Price among the Alternate Consideration in a reasonable manner reflecting the relative value of any different components of the Alternate Consideration. If holders of Common Stock are given any choice as to the securities, cash or property to be received in a Fundamental Transaction, then the Holder shall be given the same choice as to the Alternate Consideration it receives upon any exercise of this Warrant following such Fundamental Transaction.

e) Calculations. All calculations under this Section 3 shall be made to the nearest cent or the nearest 1/100th of a share, as the case may be. For purposes of this Section 3, the number of shares of Common Stock deemed to be issued and outstanding as of a given date shall be the sum of the number of shares of Common Stock (excluding treasury shares, if any) issued and outstanding.

f) Notice to Holder.

i. Adjustment to Exercise Price. Whenever the Exercise Price is adjusted pursuant to any provision of this Section 3, the Company shall within two (2) Trading Days deliver to the Holder by facsimile or email a notice setting forth the Exercise Price after such adjustment and any resulting adjustment to the number of Warrant Shares and setting forth a brief statement of the facts requiring such adjustment.

ii. Notice to Allow Exercise by Holder. If (A) the Company shall declare a dividend (or any other distribution in whatever form) on the Common Stock, (B) the Company shall declare a special nonrecurring cash dividend on or a redemption of the Common Stock, (C) the Company shall authorize the granting to all holders of the Common Stock rights or warrants to subscribe for or purchase any shares of capital stock of any class or of any rights, (D) the approval of any stockholders of the Company shall be required in connection with any reclassification of the Common Stock, any consolidation or merger to which the Company is a party, any sale or transfer of all or substantially all of the assets of the Company, or any compulsory share exchange whereby the Common Stock is converted into other securities, cash or property, or (E) the Company shall authorize the voluntary or involuntary dissolution, liquidation or winding up of the affairs of the Company, then, in each case, the Company shall cause to be delivered by facsimile or email to the Holder at its last facsimile number or email address as it shall appear upon the Warrant Register of the Company, at
least 20 calendar days prior to the applicable record or effective date hereinafter specified, a notice stating (x) the date on which a record is to be taken for the purpose of such dividend, distribution, redemption, rights or warrants, or if a record is not to be taken, the date as of which the holders of the Common Stock of record to be entitled to such dividend, distributions, redemption, rights or warrants are to be determined or (y) the date on which such reclassification, consolidation, merger, sale, transfer or share exchange is expected to become effective or close, and the date as of which it is expected that holders of the Common Stock of record shall be entitled to exchange their shares of the Common Stock for securities, cash or other property deliverable upon such reclassification, consolidation, merger, sale, transfer or share exchange; provided that the failure to deliver such notice or any defect therein or in the delivery thereof shall not affect the validity of the corporate action required to be specified in such notice. To the extent that any notice provided in this Warrant constitutes, or contains, material, non-public information regarding the Company or any of the Subsidiaries, the Company shall simultaneously file such notice with the Commission pursuant to a Current Report on Form 8-K. The Holder shall remain entitled to exercise this Warrant during the period commencing on the date of such notice to the effective date of the event triggering such notice except as may otherwise be expressly set forth herein.

Section 4. Transfer of Warrant.

a) Transferability. Subject to compliance with any applicable securities laws and the conditions set forth in Section 4(d) hereof, this Warrant and all rights hereunder are transferable, in whole or in part, upon surrender of this Warrant at the principal office of the Company or its designated agent, together with a written assignment of this Warrant substantially in the form attached hereto duly executed by the Holder or its agent or attorney and funds sufficient to pay any transfer taxes payable upon the making of such transfer. Upon such surrender and, if required, such payment, the Company shall execute and deliver a new Warrant or Warrants in the name of the assignee or assignees, as applicable, and in the denomination or denominations specified in such instrument of assignment, and shall issue to the assignor a new Warrant evidencing the portion of this Warrant not so assigned, and this Warrant shall promptly be cancelled. Notwithstanding anything herein to the contrary, the Holder shall not be required to physically surrender this Warrant to the Company unless the Holder has assigned this Warrant in full, in which case, the Holder shall surrender this Warrant to the Company within three (3) Trading Days of the date the Holder delivers an assignment form to the Company assigning this Warrant full. The Warrant, if properly assigned in accordance herewith, may be exercised by a new holder for the purchase of Warrant Shares without having a new Warrant issued.

b) New Warrants. This Warrant may be divided or combined with other Warrants upon presentation hereof at the aforesaid office of the Company, together with a written notice specifying the names and denominations in which new Warrants are to be issued, signed by the Holder or its agent or attorney. Subject to compliance with Section 4(a), as to any transfer which may be involved in such division or combination, the Company shall
execute and deliver a new Warrant or Warrants in exchange for the Warrant or Warrants to be divided or combined in accordance with such notice. All Warrants issued on transfers or exchanges shall be dated the original issue date and shall be identical with this Warrant except as to the number of Warrant Shares issuable pursuant thereto.

c) **Warrant Register.** The Company shall register this Warrant, upon records to be maintained by the Company for that purpose (the “Warrant Register”), in the name of the record Holder hereof from time to time. The Company may deem and treat the registered Holder of this Warrant as the absolute owner hereof for the purpose of any exercise hereof or any distribution to the Holder, and for all other purposes, absent actual notice to the contrary.

d) **Transfer Restrictions.** If, at the time of the surrender of this Warrant in connection with any transfer of this Warrant, the transfer of this Warrant shall not be either (i) registered pursuant to an effective registration statement under the Securities Act and under applicable state securities or blue sky laws or (ii) eligible for resale without volume or manner-of-sale restrictions or current public information requirements pursuant to Rule 144, the Company may require, as a condition of allowing such transfer, that the Holder or transferee of this Warrant, as the case may be, provide to the Company an opinion of counsel selected by the Holder or transferee of this Warrant, as the case may be, and reasonably acceptable to the Company, the form and substance of which opinion shall be reasonably satisfactory to the Company, to the effect that such transfer does not require registration of this Warrant under the Securities Act.

e) **Representation by the Holder.** The Holder, by the acceptance hereof, represents and warrants that (i) it is an “accredited investor” as defined in Regulation D promulgated under the Securities Act and (ii) it is acquiring this Warrant and, upon any exercise hereof, will acquire the Warrant Shares issuable upon such exercise, for its own account and not with a view to or for distributing or reselling such Warrant Shares or any part thereof in violation of the Securities Act or any applicable state securities law, except pursuant to sales registered or exempted under the Securities Act.

Section 5. Miscellaneous.

a) **No Rights as Stockholder Until Exercise.** This Warrant does not entitle the Holder to any voting rights, dividends or other rights as a stockholder of the Company prior to the exercise hereof as set forth in Section 2(d)(i), except as expressly set forth in Section 3.

b) **Loss, Theft, Destruction or Mutilation of Warrant.** The Company covenants that upon receipt by the Company of evidence reasonably satisfactory to it of the loss, theft, destruction or mutilation of this Warrant or any stock certificate relating to the Warrant Shares, and in case of loss, theft or destruction, of indemnity or security reasonably satisfactory to it (which, in the case of the Warrant, shall not include the posting of any bond), and upon surrender and cancellation of such Warrant or stock certificate, if mutilated, the Company will make and deliver a new Warrant or stock certificate of like tenor and dated as of such cancellation, in lieu of such Warrant or stock certificate.
c) **Saturdays, Sundays, Holidays, etc.** If the last or appointed day for the taking of any action or the expiration of any right required or granted herein shall not be a Business Day, then, such action may be taken or such right may be exercised on the next succeeding Business Day.

d) **Authorized Shares.**

1. During the period the Warrant is outstanding from and after the Initial Exercise Date, the Company covenants that it will reserve from its authorized and unissued Common Stock a sufficient number of shares to provide for the issuance of the Warrant Shares upon the exercise of any purchase rights under this Warrant. The Company further covenants that its issuance of this Warrant shall constitute full authority to its officers who are charged with the duty of issuing the necessary Warrant Shares upon the exercise of the purchase rights under this Warrant. The Company will take all such reasonable action as may be necessary to assure that such Warrant Shares may be issued as provided herein without violation of any applicable law or regulation, or of any requirements of the Trading Market upon which the Common Stock may be listed. The Company covenants that all Warrant Shares which may be issued upon the exercise of the purchase rights represented by this Warrant will, upon exercise of the purchase rights represented by this Warrant and upon payment for such Warrant Shares in accordance herewith, be duly authorized, validly issued, fully paid and nonassessable and free from all taxes, liens and charges created by the Company in respect of the issue thereof (other than taxes in respect of any transfer occurring contemporaneously with such issue).

2. Except and to the extent as waived or consented to by the Holder, the Company shall not by any action, including, without limitation, amending its certificate of incorporation or through any reorganization, transfer of assets, consolidation, merger, dissolution, issue or sale of securities or any other voluntary action, avoid or seek to avoid the observance or performance of any of the terms of this Warrant, but will at all times in good faith assist in the carrying out of all such terms and in the taking of all such actions as may be necessary or appropriate to protect the rights of Holder as set forth in this Warrant against impairment. Without limiting the generality of the foregoing, the Company will (i) not increase the par value of any Warrant Shares above the amount payable therefor upon such exercise immediately prior to such increase in par value, (ii) take all such action as may be necessary or appropriate in order that the Company may validly and legally issue fully paid and nonassessable Warrant Shares upon the exercise of this Warrant and (iii) use commercially reasonable efforts to obtain all such authorizations, exemptions or consents from any public regulatory body having jurisdiction thereof, as may be, necessary to enable the Company to perform its obligations under this Warrant.

3. Before taking any action which would result in an adjustment in the number of Warrant Shares for which this Warrant is exercisable or in the Exercise Price, the Company shall obtain all such authorizations or exemptions thereof, or consents thereto, as may be necessary from any public regulatory body or bodies having jurisdiction thereof.
e) **Jurisdiction.** All questions concerning the construction, validity, enforcement and interpretation of this Warrant shall be determined in accordance with the provisions of the Loan Agreement.

f) **Restrictions.** The Holder acknowledges that the Warrant Shares acquired upon the exercise of this Warrant, if not registered and the Holder does not utilize cashless exercise, will have restrictions upon resale imposed by state and federal securities laws.

g) **Nonwaiver and Expenses.** No course of dealing or any delay or failure to exercise any right hereunder on the part of Holder shall operate as a waiver of such right or otherwise prejudice the Holder’s rights, powers or remedies, notwithstanding the fact that all rights hereunder terminate on the Termination Date. If the Company willfully and knowingly fails to comply with any provision of this Warrant, which results in any material damages to the Holder, the Company shall pay to the Holder such amounts as shall be sufficient to cover any costs and expenses including, but not limited to, reasonable attorneys’ fees, including those of appellate proceedings, incurred by the Holder in collecting any amounts due pursuant hereto or in otherwise enforcing any of its rights, powers or remedies hereunder.

h) **Notices.** Any notice, request or other document required or permitted to be given or delivered to the Holder by the Company shall be delivered in accordance with the notice provisions of the Loan Agreement.

i) **Limitation of Liability.** No provision hereof, in the absence of any affirmative action by the Holder to exercise this Warrant to purchase Warrant Shares, and no enumeration herein of the rights or privileges of the Holder, shall give rise to any liability of the Holder for the purchase price of any Common Stock or as a stockholder of the Company, whether such liability is asserted by the Company or by creditors of the Company.

j) **Remedies.** The Holder, in addition to being entitled to exercise all rights granted by law, including recovery of damages, will be entitled to specific performance of its rights under this Warrant. The Company agrees that monetary damages would not be adequate compensation for any loss incurred by reason of a breach by it of the provisions of this Warrant and hereby agrees to waive and not to assert the defense in any action for specific performance that a remedy at law would be adequate.

k) **Successors and Assigns.** Subject to applicable securities laws, this Warrant and the rights and obligations evidenced hereby shall inure to the benefit of and be binding upon the successors and permitted assigns of the Company and the successors and permitted assigns of Holder. The provisions of this Warrant are intended to be for the benefit of any Holder from time to time of this Warrant and shall be enforceable by the Holder or holder of Warrant Shares.
l) **Amendment.** This Warrant may be modified or amended or the provisions hereof waived with the written consent of the Company and the Holder.

m) **Severability.** Wherever possible, each provision of this Warrant shall be interpreted in such manner as to be effective and valid under applicable law, but if any provision of this Warrant shall be prohibited by or invalid under applicable law, such provision shall be ineffective to the extent of such prohibition or invalidity, without invalidating the remainder of such provisions or the remaining provisions of this Warrant.

n) **Headings.** The headings used in this Warrant are for the convenience of reference only and shall not, for any purpose, be deemed a part of this Warrant.

********************************

*Signature Page Follows*

15
IN WITNESS WHEREOF, the Company has caused this Warrant to be executed by its officer thereunto duly authorized as of the date first above indicated.

AMYRIS, INC.

By: /s/ Kathleen Valiasek
   Name: Kathleen Valiasek
   Title: Chief Business Officer

[Signature page to Warrant]
NOTICE OF EXERCISE

TO: AMYRIS, INC.

(1) The undersigned hereby elects to purchase ________ Warrant Shares of the Company pursuant to the terms of the attached Warrant (only if exercised in full), and tenders herewith payment of the exercise price in full, together with all applicable transfer taxes, if any.

(2) Applicable Exercise Price: $________

(3) Payment shall take the form of (check applicable box):

[    ] in lawful money of the United States; or

[    ] the cancellation of such number of Warrant Shares as is necessary, in accordance with the formula set forth in subsection 2(c), to exercise this Warrant with respect to the maximum number of Warrant Shares purchasable pursuant to the cashless exercise procedure set forth in subsection 2(c).

(4) Please issue said Warrant Shares in the name of the undersigned or in such other name as is specified below:

__________________________________________________________

The Warrant Shares shall be delivered to the following DWAC Account Number:

_________________________________________________________________________

_________________________________________________________________________

_________________________________________________________________________

(4) Accredited Investor. The undersigned is an “accredited investor” as defined in Regulation D promulgated under the Securities Act of 1933, as amended.

[SIGNATURE OF HOLDER]

Name of Investing Entity: ______________________________________________________________
Signature of Authorized Signatory of Investing Entity: ______________________________________
Name of Authorized Signatory: _________________________________________________________
Title of Authorized Signatory: _________________________________________________________
Date: ____________________________________________________________________________
ASSIGNMENT FORM

(To assign the foregoing Warrant, execute this form and supply required information. Do not use this form to purchase shares.)

FOR VALUE RECEIVED, the foregoing Warrant and all rights evidenced thereby are hereby assigned to

Name: ________________________________
(Please Print)

Address: ________________________________
(Please Print)

Phone Number: _____________________________

Email Address: ________________________________

Dated: _____________ __, ______

Holder’s Signature: _____________________________

Holder’s Address: ________________________________
At your request, we have examined the Registration Statement on Form S-1 (the "Registration Statement") to be filed by Amyris, Inc., a Delaware corporation (the "Company"), with the Securities and Exchange Commission (the "Commission") on November 12, 2019, in connection with the registration under the Securities Act of 1933, as amended (the "Securities Act"), of an aggregate of up to 103,557,126 shares (the "Shares") of the Company’s common stock, par value $0.0001 per share (the "Common Stock"), which Shares consist of (i) 28,266,881 shares of Common Stock held by certain selling stockholders of the Company (collectively, the "Selling Stockholders"), (ii) 73,346,584 shares of Common Stock issuable by the Company to the Selling Stockholders upon the exercise of currently outstanding warrants issued by the Company to certain Selling Stockholders (the "Warrants"), and (iii) 1,943,661 shares of Common Stock issuable by the Company to Vivo Capital Fund VIII, L.P., a Delaware limited partnership, and Vivo Capital Surplus Fund VIII, L.P., a Delaware limited partnership (collectively, "Vivo") upon conversion of shares of the Company’s Series D Convertible Preferred Stock, par value $0.0001 per share (the "Series D Preferred Stock") issued by the Company to Vivo pursuant to the Securities Purchase Agreement, dated August 2, 2017, by and between the Company and Vivo (the "Purchase Agreement") and the Certificate of Designation of Preferences, Rights and Limitations of Series D Convertible Preferred Stock filed with the Secretary of State of Delaware on August 3, 2017 (the "Series D Certificate of Designation" and, together with the Warrants and the Purchase Agreement, the "Transaction Documents"). The Shares may be sold from time to time by the Selling Stockholders as set forth in the Registration Statement and the prospectus contained within the Registration Statement (the "Prospectus").

As to matters of fact relevant to this opinion, we have relied upon our examination of the following documents: (i) the Registration Statement and the Exhibits filed as a part thereof or incorporated therein by reference; (ii) the Prospectus; (iii) the Company’s Restated Certificate of Incorporation, as amended (the "Restated Certificate"); (iv) the Company’s Restated Bylaws (the "Bylaws"); (v) corporate proceedings and actions of the Company’s Board of Directors and stockholders with respect to the approval or authorization of the Restated Certificate and the Bylaws, the Transaction Documents, and the Registration Statement; and (vi) such other agreements, documents, certificates and statements of the Company, its transfer agent and public or government officials, as we have deemed advisable, and have examined such questions of law as we have considered necessary. In giving our opinion expressed in paragraph (1) below, we have also relied upon a good standing certificate issued by the Delaware Secretary of State and representations made to us by the Company, including representations that the Company has available a sufficient number of authorized shares of Common Stock that are not currently outstanding or reserved for issuance under other outstanding securities or equity plans of the Company, to enable the Company to issue and deliver all of the shares of Common Stock to be sold by the Selling Stockholders pursuant to the Registration Statement and the Prospectus. We have made no independent investigation or other attempt to verify the accuracy of any of such information or to determine the existence or non-existence of any other factual matters.

In our examination of documents for purposes of this opinion, we have assumed, and express no opinion as to, the genuineness of all signatures on original documents, the authenticity and completeness of all documents submitted to us as originals, the conformity to originals and completeness of all documents submitted to us as copies, the legal capacity of all persons or entities executing the same, the lack of any undisclosed termination, modification, waiver or amendment to any document reviewed by us, the absence of any other extrinsic agreements or documents that might change or affect the interpretation or terms of any document we have reviewed and the due authorization, execution and delivery of all documents. We have also assumed that any certificates or instruments representing the Shares have been, or will be when issued, properly signed by authorized officers of the Company or their agents.
We render this opinion only with respect to, and express no opinion herein concerning the application or effect of the laws of any jurisdiction other than the existing Delaware General Corporation Law. With respect to our opinion expressed in paragraph (1) below as to the valid existence and good standing of the Company under the laws of the State of Delaware, we have relied solely upon the Good Standing Certificate and representations made to us by the Company. With respect to our opinion expressed in paragraph (2) below, we have assumed that, (i) at or prior to the time of issuance of the Shares, the Registration Statement will have been declared effective under the Securities Act with respect to all of the Shares, and will not have been modified or rescinded and that there will not have occurred any change in law affecting the validity of the issuance of the Shares, and (ii) the Transaction Documents will remain in full force and effect through the time of issuance of any Shares and will not be amended in any manner that affects the validity of the issuance of, or payment for, any Shares.

With respect to our opinion expressed in paragraph (2) below, we have also assumed that: (a) no change or changes to the number of authorized or outstanding shares of the Common Stock, the par value per share of the Common Stock, or any of the Transaction Documents will occur that would (i) cause the exercise price per share of Common Stock or the conversion price per share of Common Stock under any of the Transaction Documents, as applicable, to be less than the par value per share of the Common Stock, or (ii) cause the Company to have insufficient authorized, unissued and unreserved shares of Common Stock available to satisfy its obligations to issue the Shares under any of the Transaction Documents; and (b) if necessary, all required action, resolutions and approvals of the Company’s Board of Directors and stockholders will be timely and validly taken and obtained so that, at each time a Warrant is exercised or the Series D Preferred Stock is converted into shares of Common Stock, (i) the number of Shares issuable upon such exercise or conversion will not exceed the number of shares of Common Stock then authorized under the Restated Certificate that are not then issued or outstanding or reserved for issuance with respect to any other then outstanding securities of the Company and (ii) the exercise price per share of Common Stock or the conversion price per share of Common Stock under any Transaction Document, as applicable, is not less than the par value per share of the Common Stock.

Opinions. Based upon and subject to the foregoing, we are of the following opinion:

(1) The Company is a corporation validly existing, in good standing, under the laws of the State of Delaware.

(2) The Shares that may be sold by the Selling Stockholders pursuant to the Registration Statement will, when delivered in the manner and for the consideration stated in the Registration Statement and the Prospectus, and when issued in accordance with the terms and conditions of the applicable Transaction Document, be validly issued, fully paid and nonassessable.

We consent to the use of this opinion as an exhibit to the Registration Statement and further consent to all references to us, if any, in the Registration Statement, the Prospectus constituting a part thereof and any amendments or supplements thereto.

[The remainder of this page has intentionally been left blank]
This opinion is intended solely for use in connection with the issuance and sale of shares subject to the Registration Statement and is not to be relied upon for any other purpose. In providing this letter, we are opining only as to the specific legal issues expressly set forth above, and no opinion shall be inferred as to any other matter or matters. This opinion is rendered on, and speaks only as of, the date of this letter first written above, is based solely on our understanding of facts in existence as of such date and does not address any potential changes in facts, circumstance or law that may occur after the date of this opinion letter. We assume no obligation to advise you of any fact, circumstance, event or change in the law or the facts that may hereafter be brought to our attention whether or not such occurrence would affect or modify the opinions expressed herein.

Very truly yours,

FENWICK & WEST LLP

By: /s/ Fenwick & West LLP
Consent of Independent Registered Public Accounting Firm

To the Board of Directors and Shareholders of Amyris, Inc.

We hereby consent to the incorporation by reference in the preliminary Prospectus constituting a part of this Registration Statement on Form S-1 of Amyris, Inc. and Subsidiaries (the Company) of our reports dated October 1, 2019, relating to the consolidated financial statements as of and for the year ended December 31, 2018 and the effectiveness of internal control over financial reporting as of December 31, 2018, which reports appear in the December 31, 2018 Annual Report on Form 10-K/A of the Company.

Our report on the effectiveness of internal control over financial reporting expresses an adverse opinion on the effectiveness of the Company’s internal control over financial reporting as of December 31, 2018.

Our report on the consolidated financial statements refers to a change in accounting for revenue recognition in 2018 due to the adoption of Topic 606, Revenue from Contracts with Customers, and contains an emphasis paragraph that states the Company has suffered recurring losses from operations and has current debt service requirements that raise substantial doubt about its ability to continue as a going concern. The consolidated financial statements do not include any adjustments that might result from the outcome of this uncertainty.

We also consent to the reference to us under the caption “Experts” in the preliminary Prospectus.

/s/ Macias Gini & O’Connell LLP

San Francisco, California

November 12, 2019
Consent of Independent Registered Public Accounting Firm

Amyris, Inc.
Emeryville, CA

We hereby consent to the incorporation by reference in the Prospectus constituting a part of this Registration Statement of our report dated October 1, 2019, relating to the consolidated financial statements of Amyris, Inc. as of and for the year ended December 31, 2017, which are incorporated by reference in that Prospectus. Our report contains an explanatory paragraph regarding the Company’s ability to continue as a going concern.

We also consent to the reference to us under the caption “Experts” in the Prospectus.

/s/ BDO USA, LLP
San Jose, CA

November 12, 2019