

PROSPECTUS SUPPLEMENT
(To Prospectus dated January 19, 2018)**13,043,479 Shares****Common Stock**

We are offering 13,043,479 shares of our common stock. Our common stock is listed on The Nasdaq Global Market under the symbol "IOVA". On January 24, 2018, the last reported sale price of our common stock on The Nasdaq Global Market was \$11.50 per share.

Investing in our common stock involves a high degree of risk. Please read "Risk Factors" beginning on page S-7 of this prospectus supplement, on page 4 of the accompanying prospectus and in the documents incorporated by reference into this prospectus supplement.

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

	PER SHARE	TOTAL
Public Offering Price	\$ 11.50	\$ 150,000,009
Underwriting Discounts and Commissions ⁽¹⁾	\$ 0.69	\$ 9,000,001
Proceeds to Iovance Biotherapeutics, Inc. before expenses	\$ 10.81	\$ 141,000,008

(1) We refer you to the section entitled "Underwriting" beginning on page S-14 of this prospectus supplement for additional information regarding total underwriter compensation.

Delivery of the shares of common stock is expected to be made on or about January 29, 2018. We have granted the underwriters an option for a period of 30 days to purchase an additional 1,956,521 shares of our common stock. If the underwriters exercise the option in full, the total underwriting discounts and commissions payable by us will be \$10,350,000, and the total proceeds to us, before expenses, will be \$162,150,000.

Sole Book-Running Manager

Jefferies

Prospectus Supplement dated January 24, 2018

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Neither we nor the underwriters have authorized anyone to provide any information or to make any representations other than those contained or incorporated by reference in this prospectus supplement or the accompanying prospectus. We take no responsibility for, and can provide no assurance as to the reliability of, any other information that others may give you. This prospectus supplement and the accompanying prospectus together constitute an offer to sell only the securities offered hereby, but only under circumstances and in jurisdictions where it is lawful to do so. The information contained in this prospectus supplement and the accompanying prospectus is current only as of its date. Our business, financial condition, results of operations and prospects may have changed since those dates. You should read this prospectus supplement, the accompanying prospectus and the documents incorporated by reference herein and therein when making your investment decision. You should also read and consider the information in the documents we have referred you to in the section of the accompanying prospectus entitled "Information Incorporated by Reference."

ABOUT THIS PROSPECTUS SUPPLEMENT

This prospectus supplement and the accompanying prospectus form part of a registration statement on Form S-3 that we filed with the Securities and Exchange Commission, or SEC, utilizing a “shelf” registration process. This document contains two parts. The first part consists of this prospectus supplement, which provides you with specific information about this offering. The second part, the accompanying prospectus, provides more general information, some of which may not apply to this offering. Generally, when we refer only to the “prospectus,” we are referring to both parts combined. This prospectus supplement may add, update or change information contained in the accompanying prospectus. To the extent that any statement we make in this prospectus supplement is inconsistent with statements made in the accompanying prospectus or any documents incorporated by reference herein or therein, the statements made in this prospectus supplement will be deemed to modify or supersede those made in the accompanying prospectus and such documents incorporated by reference herein and therein. You should read this prospectus supplement and the accompanying prospectus, including the information incorporated by reference herein and therein.

You should rely only on the information that we have included or incorporated by reference in this prospectus supplement and the accompanying prospectus. We have not authorized any dealer, salesman or other person to give any information or to make any representation other than those contained or incorporated by reference in this prospectus supplement or the accompanying prospectus. You must not rely upon any information or representation not contained or incorporated by reference in this prospectus supplement or the accompanying prospectus. This prospectus supplement and the accompanying 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 does this prospectus supplement or the accompanying 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 supplement or the accompanying 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 herein or therein is correct on any date subsequent to the date of the document incorporated by reference, even though this prospectus supplement or accompanying prospectus is delivered, or securities are sold, on a later date.

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

CAUTIONARY NOTE REGARDING FORWARD-LOOKING STATEMENTS

This prospectus supplement and the accompanying prospectus contain forward-looking statements reflecting our management's current beliefs and expectations. These statements relate to future events or to our future financial performance and involve known and unknown risks, uncertainties and other factors that may cause our actual results to be materially different from any future results expressed or implied by the forward-looking statements. In some cases, you can identify forward-looking statements by the use of words such as "believe," "anticipate," "intend," "plan," "estimate," "may," "could," "anticipate," "predict," or "expect" and similar expressions. You should not place undue reliance on forward-looking statements since they involve known and unknown risks, uncertainties and other factors that are, in many cases, beyond our control. Forward-looking statements are not guarantees of future performance. Actual events or results may differ materially from those discussed in the forward-looking statements as a result of various factors. Except as required by applicable law, we do not undertake any obligation to publicly update any forward-looking statements, whether as a result of new information, future developments or otherwise.

Important factors that could cause actual results to differ materially from those reflected in our forward-looking statements include, among others:

- our inability to obtain regulatory approval for, or successfully commercialize, our leading product candidate, LN-144, or our other product candidates;
- difficulty in enrolling patients in our clinical trials and uncertainty of clinical trial results;
- our inability to control the timing and some of the research and development activities of our third-party research institution collaborators relating to our product candidates;
- our history of operating losses and inability to become profitable;
- uncertainty and volatility in the price of our common stock;
- the costs and effects of existing and potential governmental investigations and litigation;
- our inability to meet the continued listing requirements of The Nasdaq Global Market;
- our inability to implement and maintain appropriate internal controls;
- uncertainty as to our employees' and independent contractors' compliance with regulatory standards and requirements and securities insider trading rules;
- dependence on the efforts of third parties to conduct and oversee our clinical trials for our product candidates, to manufacture clinical supplies of our product candidates and to commercialize our product candidates;
- the effect of government regulations on our business;
- a loss of any of our key management personnel;
- our inability to secure and maintain relationships with collaborators and contract manufacturers;
- our inability to develop or commercialize our product candidates due to intellectual property rights held by third parties;
- our inability to protect the confidentiality, privacy, or security of our data or our trade secrets; and
- our potential inability to access capital required to fund proposed operations.

For more detailed information about the risks and uncertainties that could cause actual results to differ materially from those implied by, or anticipated in, these forward-looking statements, please refer to the section titled "Risk Factors" herein, as well as to the section titled "Risk Factors" in our Annual Report on Form 10-K and subsequent updates that may be contained in the Company's Quarterly Reports on Form 10-Q and current reports on Form 8-K on file with the SEC. Forward-looking statements speak only as to the date they are made. Except as required by law, we do not undertake to update forward-looking statements to reflect circumstances or events that occur after the date the forward-looking statements are made.

SUMMARY

This summary highlights information contained in other parts of this prospectus supplement. Because it is only a summary, it does not contain all of the information that you should consider before investing in shares of our common stock and it is qualified in its entirety by, and should be read in conjunction with, the more detailed information appearing elsewhere in this prospectus supplement, the accompanying prospectus, and the documents incorporated by reference herein and therein. You should read all such documents carefully, especially the risk factors and our financial statements and the related notes included or incorporated by reference herein or therein, before deciding to buy shares of our common stock. Unless the context requires otherwise, references in this prospectus to “Iovance,” the “Company,” “we,” “us” and “our” refer to Iovance Biotherapeutics, Inc.

Company Overview

We are a clinical-stage biopharmaceutical company focused on the development and commercialization of novel cancer immunotherapy products designed to harness the power of a patient's own immune system to eradicate cancer cells. Our lead product candidate, LN-144 for metastatic melanoma, is an autologous adoptive cell therapy utilizing tumor-infiltrating lymphocytes, or TIL, which are T cells derived from patients' tumors. TIL therapy is a platform technology that has already been applied to the treatment of metastatic melanoma and metastatic cervical cancer by the National Cancer Institute, or NCI. We are investigating the effectiveness of TIL therapy for the treatment of metastatic melanoma, squamous cell carcinoma of the head and neck, cervical carcinoma, and metastatic non-small cell lung cancer, as well as other oncology indications.

A patient's immune system, particularly his or her TIL, plays an important role in identifying and killing cancer cells. TIL product consists of a polyclonal population of T cells that can recognize a wide variety of cancer-specific mutations. TIL treatment targets tumors through the polyclonal nature of the TIL product, and is able to overcome the hostile tumor microenvironment because of (a) the non-myeloablative chemotherapy that is a component of TIL therapy and (b) the nature of the TIL cells themselves. TIL therapy involves four steps: (i) growing a patient's TIL outside the patient's body, or ex vivo; (ii) administering non-myeloablative chemotherapy; (iii) infusing the TIL back into the patient; and (iv) subsequent infusions of up to six doses of interleukin-2 (IL-2). By expanding a patient's TIL ex vivo away from the immunosuppressive tumor microenvironment, the T cells can rapidly proliferate. As a result, billions of TIL cells, when infused back into the patient, are better able to potentially eradicate tumors.

Manufacturing of TIL historically has typically taken 5–6 weeks and has yielded a fresh, non-cryopreserved TIL product. We have developed a new manufacturing method that reduces the duration of manufacture of the TIL product to 22 days, and allows for production of a cryopreserved TIL product. We refer to our new manufacturing method as Generation 2, or Gen 2, manufacturing. We own the intellectual property associated with Gen 2 manufacturing. In late 2017, we selected Gen 2 as the manufacturing method for TIL product to be used in all our ongoing and upcoming trials. The cryopreserved TIL product offers greater flexibility in scheduling the dosing of patients, reduces the period for patients to wait until they receive their TIL product infusion, and reduces the cost of manufacture.

We are pursuing metastatic melanoma as our first target indication because of the promising initial results in this indication generated by Dr. Steven Rosenberg, M.D., Ph.D., Chief of the Surgery Branch of the NCI, and the commercial opportunity inherent in the significant unmet need of this patient population. Melanoma is a common type of skin cancer, accounting for 87,110 patients diagnosed and 9,730 deaths in 2017 in the United States according to the American Cancer Society's Cancer Estimates for 2017. According to the NCI's Surveillance, Epidemiology and End Results, or SEER, program, about 2–5% of patients with melanoma have metastatic disease. Patients with metastatic melanoma following treatment under the current standards of care have a particularly dire prognosis with very few curative treatment options.

We have an on-going Phase 2 clinical trial, C-144-01, of our lead product candidate, LN-144, TIL for the treatment of metastatic melanoma. This multicenter study is enrolling patients with melanoma whose disease has progressed following treatment with at least one systemic therapy, including anti-PD-1 and if BRAF mutated, a BRAF inhibitor. The trial is currently active at eleven U.S. sites. We anticipate initiating patient dosing in Europe during the first half of 2018. The purpose of the study is to evaluate the efficacy and safety of our autologous LN-144. The trial's primary objective is to characterize the efficacy of LN-144. Secondary outcome measures for safety and efficacy of LN-144 include objective response and complete response rates. Additional secondary or exploratory endpoints may be evaluated as well. On December 13, 2017, we reported updated results from cohort 2 of the C-144-01 study. The data reported showed clinically meaningful outcomes with a 40% Objective Response Rate, or ORR, (per the Response Evaluation Criteria in Solid Tumors, or RECIST, v1.1), which included four partial responses observed in ten efficacy-evaluable patients. We anticipate the ORR reported from these patients may change as we continue to enroll patients and record responses. The efficacy-evaluable patients had a high tumor burden despite a median of 3.6 prior therapies including both anti-CTLA and PD-1 prior treatments. The most common side effects of any grade were pyrexia, anemia and decreased neutrophil count. We have decided to use our Gen 2 manufacturing process for all ongoing Phase 2 trials and in all future TIL clinical development in trials sponsored by us, and as a result, cohort 1 of the C-144-01 melanoma study is closed to enrollment, and new patients are being enrolled in cohort 2.

We received orphan drug designation by the U.S. Food and Drug Administration, or FDA, for LN-144 in the United States to treat malignant melanoma stages IIB-IV. This designation provides seven years of market exclusivity in the United States, subject to certain limited exceptions. However, the orphan drug designation does not convey any advantage in or shorten the duration of the regulatory review or approval process. On August 31, 2017, we were granted Fast Track designation by the FDA for LN-144, TIL in advanced melanoma.


In addition to our ongoing trial in metastatic melanoma, we have initiated clinical trials of TIL therapy in cervical, and head and neck cancers. C-145-03 is a Phase 2, multicenter study that will enroll up to 47 patients and will assess the safety and efficacy of LN-145 for the treatment of patients with recurrent and/or metastatic squamous cell carcinoma of the head and neck. The trial has met the efficacy threshold for the first stage of the Simon's two-stage design and will therefore continue to enroll patients to the full sample size of 47 per protocol. C-145-04 is a Phase 2, multicenter study, designed as a Simon's two-stage design to enroll up to 47 patients and will assess the safety and efficacy of LN-145 for the treatment of patients with recurrent, metastatic, or persistent cervical carcinoma. The study is open for enrollment of patients in the United States and we anticipate the start of enrollment of patients in Europe in the first half of 2018. We have amended the protocol so that newly enrolled patients in both of these trials can be treated using TIL produced from our Gen 2 manufacturing process.

We are initiating our clinical development around non-small cell lung cancer, or NSCLC, with two studies. One of the studies is an investigator sponsored study being conducted at H. Lee Moffitt Cancer Center and Research Institute, or Moffitt, and the other is sponsored by Iovance. Patient enrollment has begun in the study in collaboration with researchers at Moffitt, Stand Up To Cancer, and other collaborators. Patients who are treatment naïve to prior anti-PD-1/PD-L1 with stage IV or recurrent NSCLC will be enrolled in a study combining TIL and nivolumab. The Iovance-sponsored Phase 2 study in patients with NSCLC who are PD-1 and PD-L1 naïve, in collaboration with MedImmune, the global biologics research and development arm of AstraZeneca, will initiate in the first half of 2018. The study with MedImmune will allow for enrollment with LN-145 alone or in combination with durvalumab. In the future, we plan to initiate additional indications alone or through collaborations.


We are also initiating clinical trials as part of our strategic alliance with The University of Texas M.D. Anderson Cancer Center, or M.D. Anderson, in multiple solid tumor cancers using two different TIL manufacturing processes, including our Gen 2 manufacturing process. These multi-arm clinical trials will evaluate the safety and efficacy of TIL therapy in ovarian cancer, various sarcomas, and pancreatic cancer, and are expected to begin enrollment in 2018.

In June 2017, we reincorporated from Nevada to Delaware, and changed our name from “Lion Biotechnologies, Inc.” to “Iovance Biotherapeutics, Inc.”

Our current product candidate pipeline is summarized in the graphic below:

INDICATION	REGIMEN	N	PARTNER	PRECLINICAL	PHASE I	PHASE 2
Melanoma	TIL LN-144	60	—			Enrolling
Cervical Cancer	TIL LN-145	47	—			Enrolling
Head & Neck Cancer	TIL LN-145	47	—			Enrolling
Non-Small Cell Lung Cancer	TIL LN-145 vs TIL LN-145 + durvalumab	24				Phase 2 trials to initiate in 2018

Our current collaboration pipeline is summarized in the graphic below:

INDICATION	REGIMEN	N	PARTNER	PRECLINICAL	PHASE I	PHASE 2
Melanoma	Combination TIL ± TBI	101				Trial completed, 54% ORR, 24% CR
Melanoma	Combination TIL + Yervoy					Trial completed, publishing results
Melanoma	Combination TIL + Keytruda	170				Enrolling
Melanoma	Combination TIL + Opdivo	12			Enrolling	
Ocular (Uveal) Melanoma	TIL	23				
Glioblastoma	TIL					
Pancreatic Cancer	TIL					
Ovarian, Sarcomas, Pancreatic	TIL					Phase 2 trials to initiate in 2018
Non-small cell lung cancer	Combination TIL + Opdivo	18			Enrolling	

For the studies listed in our collaboration pipeline table, the partner listed above is the sponsor of the clinical trial. Such partner may not use our Gen 2 manufacturing process and/or the therapeutic dosing may differ from our clinical trials. As a result, such partner data may not be representative of our data.

Recent Developments

Based on information currently available, we estimate that as of December 31, 2017, we had approximately \$145 million of cash and cash equivalents.

These estimates are preliminary and actual results may differ from these estimates due to the completion of our closing procedures with respect to the fiscal year ended December 31, 2017, final adjustments and other developments that may arise between now and the time the financial results for the 2017 fiscal year are finalized. As such, these estimates should not be viewed as a substitute for our full audited financial statements prepared in accordance with U.S. generally accepted accounting principles. These expected results could change materially and are not necessarily indicative of the results to be achieved for our 2017 fiscal year or any future period. As a result of the foregoing considerations and the other limitations described herein, investors are cautioned not to place undue reliance on this preliminary financial information. We do not undertake any obligation to publicly update or revise this estimate, except as required by law.

On January 24, 2018, we issued a press release announcing preliminary data from C-145-03, a multicenter Phase 2 study to evaluate the safety and efficacy of autologous TIL (LN-145) for the treatment of patients with recurrent and/or metastatic squamous cell carcinoma of the head and neck. Three of the eight patients treated

with LN-145 had a reduction in tumor size of at least 30% and qualified as a Partial Response, or PR, as per RECIST 1.1 criteria. The Objective Response Rate, or ORR, in the study to date is 38%. These patients had a median of 4 prior treatments for their cancer and had all received prior anti-PD-1 therapy. The most common side effects were pyrexia, chills, and hypotension. Iovance will continue to enroll patients in this study to the full sample size of 47 per protocol. We also reported preliminary data from C-145-04, a multicenter Phase 2 study to evaluate the safety and efficacy of autologous TIL (LN-145) for the treatment of patients with recurrent, metastatic or persistent cervical carcinoma. Two patients are currently evaluable. One treated with LN-145 had a confirmed PR and one patient had stable disease.

Corporate Information

Information concerning the Company is contained in the documents that we file with the SEC as a reporting company under the Securities Exchange Act of 1934, as amended, which are accessible at www.sec.gov, and on our website at www.iovance.com. The public can also obtain copies of these filings by visiting the SEC's Public Reference Room at 100 F Street NE, Washington D.C. 20549, or by calling the SEC at 1-800-SEC-0330. The information contained on, or that can be accessed through, our website is not a part of this prospectus. Investors should not rely on any such information in deciding whether to purchase our common stock. We have included our website address in this prospectus solely as an inactive textual reference.

Our principal executive offices are located at 999 Skyway Road, Suite 150, San Carlos, California 94070, and our telephone number is (650) 260-7120.

THE OFFERING

Common stock offered by us	13,043,479 shares
Common stock to be outstanding after this offering	84,998,322 shares (or 86,954,843 shares if the underwriters exercise their option to purchase additional shares in full)
Option to purchase additional shares	We have granted the underwriters an option to purchase up to an additional 1,956,521 shares of our common stock from us. The underwriters can exercise this option, in whole or in part, at any time within 30 days from the date of this prospectus supplement.
Use of proceeds	We intend to use the net proceeds of this offering to fund our ongoing clinical trials for our current product candidates, including our on-going Phase 2 clinical trials of LN-144, TIL for the treatment of metastatic melanoma, and LN-145, TIL for the treatment of cervical and head and neck cancers, to fund our planned clinical trials for our current product candidates, including our planned Phase 2 clinical trial of LN-145 for the treatment of non-small cell lung cancer, or NSCLC, in collaboration with MedImmune, as well as the NSCLC study in collaboration with the H. Lee Moffitt Cancer Center and Research Institute and our planned clinical trials in multiple solid tumor cancers with The University of Texas M.D. Anderson Cancer Center, to fund additional clinical trials to move the TIL therapy to earlier line of treatment, to fund activities related to commercial scale-up of our third party manufacturing operations and for working capital and other general corporate purposes. We may also use a portion of the net proceeds to invest in or acquire businesses or technologies that we believe are complementary to our own, although we have no current plans, commitments or agreements with respect to any acquisitions as of the date of this prospectus supplement. See "Use of Proceeds."
Risk factors	You should read the "Risk Factors" section of this prospectus supplement beginning on page S-7 and the documents referred to therein for a discussion of factors to consider carefully before deciding to invest in shares of our common stock.
Nasdaq Global Market symbol	IOVA

The number of shares of our common stock to be outstanding after this offering is based on 71,954,843 shares of our common stock outstanding as of September 30, 2017 and excludes:

- 6,706,964 shares of common stock issuable upon the exercise of stock options outstanding as of September 30, 2017, at a weighted average exercise price of \$7.33 per share;
- 847,000 shares of common stock issuable upon the conversion of shares of Series A Convertible Preferred Stock outstanding as of September 30, 2017;

- 7,946,673 shares of common stock issuable upon the conversion of shares of Series B Convertible Preferred Stock outstanding as of September 30, 2017;
- 2,608,830 shares of common stock reserved for future issuance under our 2014 Equity Incentive Plan as of September 30, 2017;
- 6,411,216 shares of common stock issuable upon exercise of warrants outstanding as of September 30, 2017, at a weighted average exercise price of \$2.51 per share; and
- 126,041 shares of common stock issuable upon vesting of restricted stock units as of September 30, 2017.

Except as otherwise indicated herein, all information in this prospectus supplement, including the number of shares that will be outstanding after this offering, does not assume or give effect to the exercise of the underwriters' option to purchase additional shares in this offering.

RISK FACTORS

An investment in our common stock involves a high degree of risk. Before deciding whether to invest in our common stock, you should carefully consider the risks described below and those discussed under the Sections captioned "Risk Factors" contained in our Annual Report on Form 10-K for the year ended December 31, 2016 and in our Quarterly Report on Form 10-Q for the quarters ended March 31, 2017, June 30, 2017 and September 30, 2017, respectively, each of which is incorporated by reference in this prospectus supplement and the accompanying prospectus, together with other information in this prospectus supplement, the accompanying prospectus, and the information and documents incorporated by reference herein and therein. If any of these risks actually occurs, our business, financial condition, results of operations or cash flow could be seriously harmed. This could cause the trading price of our common stock to decline, resulting in a loss of all or part of your investment.

Risks Related to This Offering

Purchasers in this offering will experience immediate and substantial dilution in the book value of their investment.

The public offering price of our common stock is substantially higher than the net tangible book value per share of our common stock before giving effect to this offering. Accordingly, if you purchase our common stock in this offering, you will incur immediate and substantial dilution of approximately \$7.90 per share, representing the difference between the public offering price and our pro forma as adjusted net tangible book value as of September 30, 2017. Furthermore, if outstanding options or warrants are exercised, you could experience further dilution.

A substantial number of shares of common stock may be sold in the market following this offering, which may depress the market price for our common stock.

The shares of common stock sold in this offering may be resold in the public market at any time. In addition, pursuant to a registration statement that was declared effective by the Securities and Exchange Commission, or SEC, in August 2017, we registered the resale of 12,822,361 shares of then outstanding shares of common stock and 7,946,673 shares of our common stock issuable upon the conversion of currently outstanding shares of our Series B Convertible Preferred Stock. Additionally, in July 2017, we registered the resale of 6,680,719 shares of then outstanding shares of common stock, 847,000 shares of our common stock issuable upon the conversion of currently outstanding shares of our Series A Convertible Preferred Stock, and 6,466,216 shares of our common stock issuable upon the exercise of currently outstanding warrants, in each case pursuant to a registration statement that the SEC declared effective in August 2017. Further, certain shares of our common stock that are currently outstanding but have not been registered for resale may currently be sold under Rule 144 under the Securities Act of 1933, as amended. Sales of a substantial number of these shares in the public market following this offering, or the perception that those sales may occur, could cause the market price of our common stock to decline.

We have broad discretion to determine how to use the funds raised in this offering, and may use them in ways that may not enhance our operating results or the price of our common stock.

Our management will have broad discretion over the use of proceeds from this offering, and we could spend the proceeds from this offering in ways our stockholders may not agree with or that do not yield a favorable return, if at all. We intend to use the net proceeds of this offering to fund our ongoing clinical trials for our current product candidates, including our on-going Phase 2 clinical trials of LN-144, TIL for the treatment of metastatic melanoma, and LN-145, TIL for the treatment of cervical and head and neck cancers, to fund our planned clinical trials for our current product candidates, including our planned Phase 2 clinical trial of LN-145 for the treatment of non-small cell lung cancer, or NSCLC, in collaboration with MedImmune, as well as the NSCLC study in collaboration with the H. Lee Moffitt Cancer Center and Research Institute and our planned clinical trials in multiple solid tumor cancers with The University of Texas M.D. Anderson Cancer Center, to fund additional clinical trials to move the TIL therapy to earlier line of treatment, to fund activities related to commercial scale-up of our third party manufacturing operations and for working capital and other general corporate purposes. However, our use of these proceeds may differ substantially from our

current plans. If we do not invest or apply the proceeds of this offering in ways that improve our operating results, we may fail to achieve expected financial results, which could cause our stock price to decline.

We will need to obtain additional financing to fund our operations and, if we are unable to obtain such financing, we may be unable to complete the development and commercialization of our product candidates.

Our operations have consumed substantial amounts of cash since inception. From our inception to September 30, 2017, we have cumulative net cash flows used by operating activities of \$130.2 million. We will need to obtain additional financing to fund our future operations, including completing the development and commercialization of our product candidates. We will need to obtain additional financing to conduct additional trials for the approval of our product candidates if requested by regulatory authorities, and to complete the development of any additional product candidates we might acquire. Moreover, our fixed expenses such as rent, minimum payments to our contract manufacturers, and other contractual commitments, including those for our research collaborations, are substantial and are expected to increase in the future.

Our future funding requirements will depend on many factors, including, but not limited to:

- Progress, timing, scope and costs of our clinical trials, including the ability to timely initiate clinical sites, enroll subjects and manufacture TIL for treatment for patients in our ongoing, planned and potential future clinical trials;
- Time and cost necessary to obtain regulatory approvals that may be required by regulatory authorities to execute clinical trials or commercialize our product;
- Our ability to successfully commercialize our product candidates, if approved;
- Our ability to have clinical and commercial product successfully manufactured consistent with FDA and EMA regulations;
- Amount of sales and other revenues from product candidates that we may commercialize, if any, including the selling prices for such potential products and the availability of adequate third-party coverage and reimbursement for patients;
- Sales and marketing costs associated with commercializing our products, if approved, including the cost and timing of building our marketing and sales capabilities;
- Terms and timing of our current and any potential future collaborations, licensing or other arrangements that we have established or may establish;
- Cash requirements of any future acquisitions or the development of other product candidates;
- Costs of operating as a public company;
- Time and cost necessary to respond to technological, regulatory, political and market developments;
- Costs of filing, prosecuting, defending and enforcing any patent claims and other intellectual property rights; and
- Costs associated with any potential business or product acquisitions, strategic collaborations, licensing agreements or other arrangements that we may establish.

Until we can generate a sufficient amount of revenue, we may finance future cash needs through public or private equity offerings, license agreements, debt financings, collaborations, strategic alliances and marketing or distribution arrangements. Additional funds may not be available when we need them on terms that are acceptable to us, or at all. If adequate funds are not available, we may be required to delay or reduce the scope of or eliminate one or more of our research or development programs or our commercialization efforts. We may seek to access the public or private capital markets whenever conditions are favorable, even if we do not have an immediate need for additional capital at that time. In addition, if we raise additional funds through collaborations, strategic alliances or marketing, distribution or licensing arrangements with third parties, we may have to relinquish valuable rights to our technologies, future revenue streams or product candidates or to grant licenses on terms that may not be favorable to us.

USE OF PROCEEDS

We estimate that the net proceeds from our issuance and sale of 13,043,479 shares of common stock in this offering will be approximately \$140.5 million, or approximately \$161.7 million if the underwriters exercise their option to purchase additional shares in full, after deducting the underwriting discounts and commissions and the estimated offering expenses payable by us.

We intend to use the net proceeds of this offering to fund our ongoing clinical trials for our current product candidates, including our on-going Phase 2 clinical trials of LN-144, TIL for the treatment of metastatic melanoma, and LN-145, TIL for the treatment of cervical and head and neck cancers, to fund our planned clinical trials for our current product candidates, including our planned Phase 2 clinical trial of LN-145 for the treatment of non-small cell lung cancer, or NSCLC, in collaboration with MedImmune, as well as the NSCLC study in collaboration with the H. Lee Moffitt Cancer Center and Research Institute and our planned clinical trials in multiple solid tumor cancers with The University of Texas M.D. Anderson Cancer Center, to fund additional clinical trials to move the TIL therapy to earlier line of treatment, to fund activities related to commercial scale-up of our third party manufacturing operations and for working capital and other general corporate purposes. We may also use a portion of the net proceeds to invest in or acquire businesses or technologies that we believe are complementary to our own, although we have no current plans, commitments or agreements with respect to any acquisitions as of the date of this prospectus supplement. Pending these uses, we plan to invest these net proceeds in investment-grade, interest bearing securities.

These expected uses represent our intentions based upon our current plans and business conditions, which could change in the future as our plans and business conditions evolve. The amounts and timing of our actual expenditures may vary significantly depending on numerous factors, including the progress of our development, the status of and results from clinical trials, and any unforeseen cash needs. As a result, our management will have broad discretion in the application of the net proceeds from this offering, and investors will be relying on the judgment of our management regarding the application of the net proceeds from this offering. The timing and amount of our actual expenditures will be based on many factors, including cash flows from operations and the anticipated growth of our business.

MATERIAL U.S. FEDERAL INCOME TAX CONSEQUENCES TO NON-U.S. HOLDERS

The following is a general discussion of the material U.S. federal income tax consequences of the acquisition, ownership and disposition of our common stock by "Non-U.S. Holders" (as defined below). This discussion is a summary for general information purposes only and does not consider all aspects of U.S. federal income taxation that may be relevant to particular Non-U.S. Holders in light of their individual circumstances or to certain types of Non-U.S. Holders subject to special tax rules under the Internal Revenue Code of 1986, as amended, or the Code, including partnerships or other pass-through entities for U.S. federal income tax purposes, banks, financial institutions or other financial services entities, broker-dealers, insurance companies, tax-exempt organizations, regulated investment companies, real estate investment trusts, controlled foreign corporations, passive foreign investment companies, corporations that accumulate earnings to avoid U.S. federal income tax, persons who use or are required to use mark-to-market accounting, persons that hold our shares as part of a "straddle," a "hedge" or a "conversion transaction," persons for whom our stock constitutes "qualified small business stock" within the meaning of Section 1202 of the Code, certain former citizens or permanent residents of the U.S., or investors in pass-through entities. In addition, this summary does not address the effects of any applicable gift or estate tax, and this summary does not address the potential application of the alternative minimum tax, Medicare contribution tax or any tax considerations that may apply to Non-U.S. Holders of our common stock under state, local or non-U.S. tax laws or any other U.S. federal tax laws.

This summary is based on the Code, and applicable Treasury Regulations, rulings, administrative pronouncements and decisions as of the date of this registration statement, all of which are subject to change or differing interpretations at any time with possible retroactive effect. We have not sought, and will not seek, any ruling from the Internal Revenue Service, or the IRS, with respect to the tax consequences discussed herein, and there can be no assurance that the IRS will not take a position contrary to the tax consequences discussed below or that any position taken by the IRS would not be sustained. This discussion assumes that a Non-U.S. Holder will hold our common stock as a "capital asset" within the meaning of Section 1221 of the Code (generally, property held for investment).

The following discussion is for general information only and is not tax advice for any Non-U.S. Holder under its particular circumstances. Persons considering the purchase of our common stock pursuant to this offering should consult their tax advisors concerning the U.S. federal income, estate and gift tax consequences of acquiring, owning and disposing of our common stock in light of their particular situations as well as any consequences arising under the laws of any other taxing jurisdiction, including any state, local and non-U.S. tax consequences and the possible application of tax treaties that might change the general provisions discussed below.

For purposes of this discussion, the term "Non-U.S. Holder" means a beneficial owner of our shares that is not a partnership (or entity or arrangement treated as a partnership for U.S. federal income tax purposes) or an entity that is treated as a disregarded entity for U.S. federal income tax purposes and is not:

- an individual who is a citizen or resident of the U.S.;
- a corporation (or other entity treated as a corporation for U.S. federal income tax purposes) created or organized in the U.S. or under the laws of the U.S. or of any state thereof or the District of Columbia;
- an estate, the income of which is subject to U.S. federal income tax regardless of its source; or
- a trust if (1) a U.S. court can exercise primary supervision over the trust's administration and one or more U.S. persons have the authority to control all of the trust's substantial decisions or (2) the trust has a valid election in effect under applicable U.S. Treasury Regulations to be treated as a U.S. person for U.S. federal income tax purposes.

If a partnership (or entity or arrangement treated as a partnership for U.S. federal income tax purposes) or an entity that is treated as a disregarded entity for U.S. federal income tax purposes (regardless of its place of organization or formation) is a beneficial owner of our common stock, the tax treatment of a partner in the partnership or the owner of the disregarded entity will generally depend upon the status of the partner or the owner of the disregarded entity

and the activities of the partnership or the disregarded entity. If you are a partner of a partnership holding our common stock or the owner of a disregarded entity holding our common stock, you should consult your tax advisor regarding the tax consequences of the purchase, ownership, and disposition of our common stock.

PROSPECTIVE INVESTORS SHOULD CONSULT THEIR TAX ADVISORS REGARDING THE PARTICULAR U.S. FEDERAL INCOME TAX CONSEQUENCES TO THEM OF ACQUIRING, OWNING AND DISPOSING OF OUR COMMON STOCK, AS WELL AS ANY TAX CONSEQUENCES ARISING UNDER ANY STATE, LOCAL OR FOREIGN TAX LAWS AND ANY OTHER U.S. FEDERAL TAX LAWS.

Distributions on Our Common Stock

In general, distributions, if any, paid to a Non-U.S. Holder (to the extent paid out of our current or accumulated earnings and profits, as determined under U.S. federal income tax principles) will constitute dividends and be subject to U.S. withholding tax at a rate equal to 30% of the gross amount of the dividend, or a lower rate prescribed by an applicable income tax treaty, unless the dividends are effectively connected with a trade or business carried on by the Non-U.S. Holder within the U.S. Any distribution not constituting a dividend (because such distribution exceeds our current and accumulated earnings and profits) will be treated first as reducing the Non-U.S. Holder's basis in its shares of common stock, but not below zero, and to the extent it exceeds the Non-U.S. Holder's basis, as capital gain and will be treated as described below under "Gain on Sale, Exchange or Other Disposition of Our Common Stock".

A Non-U.S. Holder who claims the benefit of an applicable income tax treaty generally will be required to satisfy certain certification and other requirements prior to the distribution date. Non-U.S. Holders must generally provide the withholding agent with a properly executed IRS Form W-8BEN, Form W-8BEN-E or other appropriate form claiming an exemption from or reduction in withholding under an applicable income tax treaty. This certification must be updated periodically. If a Non-U.S. Holder holds our common stock through a financial institution or other agent acting on the Non-U.S. Holder's behalf, the Non-U.S. Holder will be required to provide appropriate documentation to the agent, who then will be required to provide certification to us or our paying agent, either directly or through other intermediaries. If tax is withheld in an amount in excess of the amount applicable under an income tax treaty, a refund of the excess amount may generally be obtained by timely filing an appropriate claim for refund with the IRS. Non-U.S. Holders should consult their tax advisors regarding their entitlement to benefits under an applicable income tax treaty.

Dividends that are effectively connected with a Non-U.S. Holder's conduct of a U.S. trade or business (and, if required by an applicable income tax treaty, attributable to a U.S. permanent establishment or fixed base of the Non-U.S. Holder) generally will not be subject to U.S. withholding tax if the Non-U.S. Holder provides the withholding agent with the required forms, including IRS Form W-8ECI, but instead generally will be subject to U.S. federal income tax on a net income basis at the regular graduated rates in the same manner as if the Non-U.S. Holder were a resident of the U.S. A corporate Non-U.S. Holder that receives effectively connected dividends may also be subject to an additional branch profits tax at a rate of 30% (or a lower rate prescribed by an applicable income tax treaty) of its effectively connected earnings and profits for the taxable year, as adjusted for certain items.

Gain on Sale, Exchange or Other Disposition of Our Common Stock

In general, a Non-U.S. holder will not be subject to any U.S. federal income tax or withholding tax on any gain realized upon such holder's sale, exchange or other disposition of shares of our common stock unless:

- (i) the gain is effectively connected with a trade or business carried on by the Non-U.S. Holder within the U.S. (and, if required by an applicable income tax treaty, attributable to a U.S. permanent establishment or fixed base of the Non-U.S. Holder);
- (ii) the Non-U.S. Holder is an individual who is present in the U.S. for 183 days or more in the taxable year of disposition and certain other conditions are met; or

(iii) we are or have been a “United States real property holding corporation” for U.S. federal income tax purposes at any time during the shorter of the five-year period ending on the date of disposition or the period that the Non-U.S. Holder held the common stock, and, in the case where shares of our common stock are regularly traded on an established securities market, the Non-U.S. Holder owns, or is treated as owning, more than five percent of our common stock at any time during the foregoing period.

Net gain realized by a Non-U.S. Holder described in clause (i) above generally will be subject to U.S. federal income tax in the same manner as if the Non-U.S. Holder were a U.S. person. Any gains of a corporate Non-U.S. Holder described in clause (i) above may also be subject to an additional branch profits tax at a 30% rate, or such lower rate as may be specified by an applicable income tax treaty.

Gain realized by an individual Non-U.S. Holder described in clause (ii) above will be subject to a flat 30% (or such lower rate specified by an applicable income tax treaty) tax, which gain may be offset by certain U.S. source capital losses, even though the individual is not considered a resident of the U.S., provided that the Non-U.S. Holder has timely filed U.S. federal income tax returns with respect to such losses.

For purposes of clause (iii) above, a corporation is a “United States real property holding corporation” if the fair market value of its U.S. real property interests equals or exceeds 50% of the sum of the fair market value of its worldwide real property interests plus its other assets used or held for use in a trade or business. We believe that we are not, and we do not anticipate that we will become, a United States real property holding corporation. However, because the determination of whether we are a United States real property holding corporation depends on the fair market value of our U.S. real property interests relative to the fair market value of our other business assets, there can be no assurance that we will not become a United States real property holding corporation in the future. If we become a United States real property holding corporation, as long as our common stock is regularly traded on an established securities market, our common stock will be treated as a U.S. real property interest only with respect to a Non-U.S. Holder that actually or constructively held more than 5% of our common stock at any time during the shorter of the two periods described in clause (iii), above. If gain on the sale or other taxable disposition of our common stock were subject to taxation under clause (iii) above, the Non-U.S. Holder would be subject to regular U.S. federal income tax with respect to such gain in generally the same manner as a U.S. person.

Information Reporting and Backup Withholding

Generally, we must report annually to the IRS and to each Non-U.S. Holder the amount of dividends paid, the name and address of the recipient, and the amount, if any, of tax withheld. These information reporting requirements apply even if withholding was not required because the dividends were effectively connected with the Non-U.S. Holder’s conduct of a trade or business within the U.S. or withholding was reduced by an applicable income tax treaty. Under applicable income tax treaties or other agreements, the IRS may make its reports available to the tax authorities in the Non-U.S. Holder’s country of residence.

Dividends paid to a Non-U.S. Holder that is not an exempt recipient generally will be subject to backup withholding, currently at a rate of 28%, unless the Non-U.S. Holder certifies to the withholding agent as to its foreign status, which certification may generally be made on IRS Form W-8BEN, Form W-8BEN-E or other appropriate version of IRS Form W-8. Notwithstanding the foregoing, backup withholding may apply if either we or our paying agent has actual knowledge, or reason to know, that the holder is a U.S. person that is not an exempt recipient.

Proceeds from the sale or other disposition of common stock by a Non-U.S. Holder effected by or through a U.S. office of a broker will generally be subject to information reporting and backup withholding, currently at a rate of 28%, unless the Non-U.S. Holder certifies to the withholding agent under penalties of perjury as to, among other things, its name, address and status as a Non-U.S. Holder or otherwise establishes an exemption. Payment of disposition proceeds effected outside the U.S. by or through a non-U.S. office of a non-U.S. broker generally will not be subject to information reporting or backup withholding if the payment is not received in the U.S. Information reporting, but generally not backup withholding (provided the broker does not have actual knowledge or reason to

know that the holder is a U.S. person that is not an exempt recipient), will apply to such a payment if the broker has certain connections with the U.S. unless the broker has documentary evidence in its records that the beneficial owner thereof is a Non-U.S. Holder and specified conditions are met or an exemption is otherwise established.

Backup withholding is not an additional tax. Any amount withheld under the backup withholding rules from a payment to a Non-U.S. Holder that results in an overpayment of taxes generally will be refunded, or credited against the holder's U.S. federal income tax liability, if any, provided that the required information is timely furnished to the IRS.

Foreign Accounts

A U.S. federal withholding tax of 30% may apply to dividends and the gross proceeds of a disposition of our common stock paid to a "foreign financial institution" (as specially defined under applicable rules) unless such institution enters into an agreement with the U.S. government to withhold on certain payments and to collect and provide to the U.S. tax authorities substantial information regarding certain U.S. account holders of such institution (which includes certain equity and debt holders of such institution, as well as certain account holders that are foreign entities with U.S. owners). This U.S. federal withholding tax of 30% will also apply to payments of dividends and the gross proceeds of a disposition of our common stock paid to a "non-financial foreign entity" (as specially defined under applicable rules) unless such entity either certifies it does not have any substantial U.S. owners or provides the withholding agent with a certification identifying substantial direct and indirect U.S. owners of the entity. The withholding tax described above will not apply if the foreign financial institution or non-financial foreign entity otherwise qualifies for an exemption from the rules. Under certain circumstances, a Non-U.S. Holder might be eligible for refunds or credits of such taxes. The U.S. has entered into agreements with certain countries that modify these general rules for entities located in those countries. Prospective investors are encouraged to consult with their tax advisors regarding the possible implications of these withholding provisions on their investment in our common stock.

The withholding provisions described above currently apply to payments of dividends and will generally apply to payments of gross proceeds from a sale or other disposition of our common stock on or after January 1, 2019.

UNDERWRITING

Jefferies LLC is acting as the sole book-running manager of this offering. Jefferies LLC is also acting as the representative of the underwriters named below. Subject to the terms and conditions stated in the underwriting agreement dated the date of this prospectus supplement, each underwriter named below has severally agreed to purchase, and we have agreed to sell to that underwriter, the number of shares set forth opposite the underwriter's name in the following table.

UNDERWRITER	NUMBER OF SHARES
Jefferies LLC	13,043,479
Total	<u>13,043,479</u>

The underwriting agreement provides that the obligations of the several underwriters are subject to certain conditions precedent such as the receipt by the underwriters of officers' certificates and legal opinions and approval of certain legal matters by their counsel. The underwriting agreement provides that the underwriters will purchase all of the shares of common stock if any of them are purchased. If an underwriter defaults, the underwriting agreement provides that the purchase commitments of the nondefaulting underwriters may be increased or the underwriting agreement may be terminated. We have agreed to indemnify the underwriters and certain of their controlling persons against certain liabilities, including liabilities under the Securities Act, and to contribute to payments that the underwriters may be required to make in respect of those liabilities.

The underwriters have advised us that, following the completion of this offering, they currently intend to make a market in the common stock as permitted by applicable laws and regulations. However, the underwriters are not obligated to do so, and the underwriters may discontinue any market-making activities at any time without notice in their sole discretion. Accordingly, no assurance can be given as to the liquidity of the trading market for the common stock, that you will be able to sell any of the common stock held by you at a particular time or that the prices that you receive when you sell will be favorable.

The underwriters are offering the shares of common stock subject to their acceptance of the shares of common stock from us subject to prior sale. The underwriters reserve the right to withdraw, cancel or modify offers to the public and to reject orders in whole or in part. In addition, the underwriters have advised us that they do not intend to confirm sales to any account over which they exercise discretionary authority.

Commission and Expenses

The underwriters have advised us that they propose to offer the shares of common stock to the public at the public offering price set forth on the cover page of this prospectus supplement and to certain dealers, which may include the underwriters, at that price less a concession not in excess of \$0.414 per share of common stock. After the offering, the public offering price and concession to dealers may be reduced by the representative. No such reduction will change the amount of proceeds to be received by us as set forth on the cover page of this prospectus supplement.

The following table shows the public offering price, the underwriting discounts and commissions that we are to pay the underwriters and the proceeds, before expenses, to us in connection with this offering. Such amounts are shown assuming both no exercise and full exercise of the underwriters' option to purchase additional shares.

	PER SHARE		TOTAL	
	WITHOUT OPTION TO PURCHASE ADDITIONAL SHARES	WITH OPTION TO PURCHASE ADDITIONAL SHARES	WITHOUT OPTION TO PURCHASE ADDITIONAL SHARES	WITH OPTION TO PURCHASE ADDITIONAL SHARES
Public offering price	\$ 11.50	\$ 11.50	\$150,000,009	\$172,500,000
Underwriting discounts and commissions paid by us	\$ 0.69	\$ 0.69	\$ 9,000,001	\$ 10,350,000
Proceeds to us, before expenses	\$ 10.81	\$ 10.81	\$141,000,008	\$162,150,000

We estimate expenses payable by us in connection with this offering, other than the underwriting discounts and commissions referred to above, will be approximately \$500,000. We have also agreed to reimburse the underwriters for certain other expenses in an amount not to exceed \$40,000 as set forth in the underwriting agreement.

Listing

Our common stock is listed on The Nasdaq Global Market under the symbol "IOVA."

Option to Purchase Additional Shares

We have granted to the underwriters an option, exercisable for 30 days from the date of this prospectus supplement, to purchase, from time to time, in whole or in part, up to an aggregate of shares from us, at the public offering price set forth on the cover page of this prospectus supplement, less underwriting discounts and commissions set forth on the cover of this prospectus supplement. If the underwriters exercise this option, each underwriter will be obligated, subject to specified conditions, to purchase a number of additional shares proportionate to that underwriter's initial purchase commitment as indicated in the table above.

No Sales of Similar Securities

We and our officers and directors, together with their affiliated entities have agreed, subject to specified exceptions, not to directly or indirectly:

- sell, offer, contract or grant any option to sell (including any short sale), pledge, transfer, establish an open "put equivalent position" within the meaning of Rule 16a-1(h) under the Securities Exchange Act of 1934, as amended, or
- otherwise dispose of any shares of common stock, options or warrants to acquire shares of common stock, or securities exchangeable or exercisable for or convertible into shares of common stock currently or hereafter owned either of record or beneficially, or
- publicly announce an intention to do any of the foregoing for a period of 60 days (or 90 days with respect to the company) after the date of this prospectus without the prior written consent of Jefferies LLC.

This restriction terminates after the close of trading of the common stock on and including the 60th day (or 90th day with respect to the company) after the date of this prospectus.

Jefferies LLC may, in its sole discretion and at any time or from time to time before the termination of the 60-day period (or 90-day period with respect to the company) release all or any portion of the securities subject to lock-up agreements. There are no existing agreements between the underwriters and any of our shareholders who will execute a lock-up agreement, providing consent to the sale of shares prior to the expiration of the lock-up period.

Stabilization

The underwriters have advised us that they, pursuant to Regulation M under the Securities Exchange Act of 1934, as amended, and certain persons participating in the offering may engage in short sale transactions, stabilizing transactions, syndicate covering transactions or the imposition of penalty bids in connection with this offering. These activities may have the effect of stabilizing or maintaining the market price of the common stock at a level above that which might otherwise prevail in the open market. Establishing short sales positions may involve either “covered” short sales or “naked” short sales.

“Covered” short sales are sales made in an amount not greater than the underwriters’ option to purchase additional shares of our common stock in this offering. The underwriters may close out any covered short position by either exercising their option to purchase additional shares of our common stock or purchasing shares of our common stock in the open market. In determining the source of shares to close out the covered short position, the underwriters will consider, among other things, the price of shares available for purchase in the open market as compared to the price at which they may purchase shares through the option to purchase additional shares.

“Naked” short sales are sales in excess of the option to purchase additional shares of our common stock. The underwriters must close out any naked short position by purchasing shares in the open market. A naked short position is more likely to be created if the underwriters are concerned that there may be downward pressure on the price of the shares of our common stock in the open market after pricing that could adversely affect investors who purchase in this offering.

A stabilizing bid is a bid for the purchase of shares of common stock on behalf of the underwriters for the purpose of fixing or maintaining the price of the common stock. A syndicate covering transaction is the bid for or the purchase of shares of common stock on behalf of the underwriters to reduce a short position incurred by the underwriters in connection with the offering. Similar to other purchase transactions, the underwriters’ purchases to cover the syndicate short sales may have the effect of raising or maintaining the market price of our common stock or preventing or retarding a decline in the market price of our common stock. As a result, the price of our common stock may be higher than the price that might otherwise exist in the open market. A penalty bid is an arrangement permitting the underwriters to reclaim the selling concession otherwise accruing to a syndicate member in connection with the offering if the common stock originally sold by such syndicate member are purchased in a syndicate covering transaction and therefore have not been effectively placed by such syndicate member.

Neither we nor any of the underwriters make any representation or prediction as to the direction or magnitude of any effect that the transactions described above may have on the price of our common stock. The underwriters are not obligated to engage in these activities and, if commenced, any of the activities may be discontinued at any time.

Electronic Distribution

A prospectus in electronic format may be made available by e-mail or on the websites or through online services maintained by one or more of the underwriters or their affiliates. In those cases, prospective investors may view offering terms online and may be allowed to place orders online. The underwriters may agree with us to allocate a specific number of shares of common stock for sale to online brokerage account holders. Any such allocation for online distributions will be made by the underwriters on the same basis as other allocations. Other than the prospectus in electronic format, the information on the underwriters’ websites and any information contained in any other website maintained by any of the underwriters is not part of this prospectus supplement or the accompanying prospectus, has not been approved and/or endorsed by us or the underwriters and should not be relied upon by investors.

Other Activities and Relationships

The underwriters and certain of their affiliates are full service financial institutions engaged in various activities, which may include securities trading, commercial and investment banking, financial advisory, investment management, investment research, principal investment, hedging, financing and brokerage activities. The underwriters and certain of their affiliates have, from time to time, performed, and may in the future perform, various commercial and investment banking and financial advisory services for us and our affiliates, for which they received or will receive customary fees and expenses.

In the ordinary course of their various business activities, the underwriters and certain of their affiliates may make or hold a broad array of investments and actively trade debt and equity securities (or related derivative securities) and financial instruments (including bank loans) for their own account and for the accounts of their customers, and such investment and securities activities may involve securities and/or instruments issued by us and our affiliates. If the underwriters or their respective affiliates have a lending relationship with us, they routinely hedge their credit exposure to us consistent with their customary risk management policies. The underwriters and their respective affiliates may hedge such exposure by entering into transactions which consist of either the purchase of credit default swaps or the creation of short positions in our securities or the securities of our affiliates, including potentially the common stock offered hereby. Any such short positions could adversely affect future trading prices of the common stock offered hereby. The underwriters and certain of their respective affiliates may also communicate independent investment recommendations, market color or trading ideas, or publish or express independent research views in respect of such securities or instruments, and may at any time hold, or recommend to clients that they acquire, long and/or short positions in such securities and instruments.

Disclaimers About Non-U.S. Jurisdictions

Australia

This prospectus is not a disclosure document for the purposes of Australia's Corporations Act 2001 (Cth) of Australia, or Corporations Act, has not been lodged with the Australian Securities & Investments Commission and is only directed to the categories of exempt persons set out below. Accordingly, if you receive this prospectus in Australia:

You confirm and warrant that you are either:

- a "sophisticated investor" under section 708(8)(a) or (b) of the Corporations Act;
- a "sophisticated investor" under section 708(8)(c) or (d) of the Corporations Act and that you have provided an accountant's certificate to the company which complies with the requirements of section 708(8)(c)(i) or (ii) of the Corporations Act and related regulations before the offer has been made; or
- a "professional investor" within the meaning of section 708(11)(a) or (b) of the Corporations Act.

To the extent that you are unable to confirm or warrant that you are an exempt sophisticated investor or professional investor under the Corporations Act any offer made to you under this prospectus is void and incapable of acceptance.

You warrant and agree that you will not offer any of the shares issued to you pursuant to this prospectus for resale in Australia within 12 months of those shares being issued unless any such resale offer is exempt from the requirement to issue a disclosure document under section 708 of the Corporations Act.

European Economic Area

In relation to each member state of the European Economic Area which has implemented the Prospectus Directive, each referred to herein as a Relevant Member State, with effect from and including the date on which the Prospectus Directive is implemented in that Relevant Member State, referred to herein as the Relevant Implementation Date, no offer of any securities which are the subject of the offering contemplated by this prospectus has been or will be made to the public in that Relevant Member State other than any offer where a prospectus has been or will be published in relation to such securities that has been approved by the competent authority in that Relevant Member State or,

where appropriate, approved in another Relevant Member State and notified to the relevant competent authority in that Relevant Member State in accordance with the Prospectus Directive, except that with effect from and including the Relevant Implementation Date, an offer of such securities may be made to the public in that Relevant Member State:

- to any legal entity which is a “qualified investor” as defined in the Prospectus Directive;
- to fewer than 100 or, if the Relevant Member State has implemented the relevant provision of the 2010 PD Amending Directive, 150, natural or legal persons (other than qualified investors as defined in the Prospectus Directive), as permitted under the Prospectus Directive, subject to obtaining the prior consent of the representative of the underwriters for any such offer; or
- in any other circumstances falling within Article 3(2) of the Prospectus Directive,

provided that no such offer of securities shall require the Company or any of the underwriters to publish a prospectus pursuant to Article 3 of the Prospectus Directive or supplement a prospectus pursuant to Article 16 of the Prospectus Directive.

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

Hong Kong

No securities have been offered or sold, and no securities may be offered or sold, in Hong Kong, by means of any document, other than to persons whose ordinary business is to buy or sell shares or debentures, whether as principal or agent; or to “professional investors” as defined in the Securities and Futures Ordinance (Cap. 571) of Hong Kong and any rules made under that Ordinance; or in other circumstances which do not result in the document being a “prospectus” as defined in the Companies Ordinance (Cap. 32) of Hong Kong or which do not constitute an offer to the public within the meaning of the Companies Ordinance (Cap. 32) of Hong Kong. No document, invitation or advertisement relating to the securities has been issued or may be issued or may be in the possession of any person for the purpose of issue (in each case whether in Hong Kong or elsewhere), which is directed at, or the contents of which are likely to be accessed or read by, the public of Hong Kong (except if permitted under the securities laws of Hong Kong) other than with respect to securities which are or are intended to be disposed of only to persons outside Hong Kong or only to “professional investors” as defined in the Securities and Futures Ordinance (Cap. 571) of Hong Kong and any rules made under that Ordinance.

This prospectus has not been registered with the Registrar of Companies in Hong Kong. Accordingly, this prospectus may not be issued, circulated or distributed in Hong Kong, and the securities may not be offered for subscription to members of the public in Hong Kong. Each person acquiring the securities will be required, and is deemed by the acquisition of the securities, to confirm that he is aware of the restriction on offers of the securities described in this prospectus and the relevant offering documents and that he is not acquiring, and has not been offered any securities in circumstances that contravene any such restrictions.

Israel

In the State of Israel this prospectus shall not be regarded as an offer to the public to purchase shares of common stock under the Israeli Securities Law, 5728–1968, which requires a prospectus to be published and authorized by the Israel Securities Authority, if it complies with certain provisions of Section 15 of the Israeli Securities Law, 5728–1968, including, inter alia, if: (i) the offer is made, distributed or directed to not more than 35 investors, subject to certain conditions (the “Addressed Investors”); or (ii) the offer is made, distributed or directed to certain

qualified investors defined in the First Addendum of the Israeli Securities Law, 5728–1968, subject to certain conditions (the “Qualified Investors”). The Qualified Investors shall not be taken into account in the count of the Addressed Investors and may be offered to purchase securities in addition to the 35 Addressed Investors. The Company has not and will not take any action that would require it to publish a prospectus in accordance with and subject to the Israeli Securities Law, 5728–1968. The Company and the underwriters have not and will not distribute this prospectus or make, distribute or direct an offer to subscribe for our common stock to any person within the State of Israel, other than to Qualified Investors and up to 35 Addressed Investors.

Qualified Investors may have to submit written evidence that they meet the definitions set out in of the First Addendum to the Israeli Securities Law, 5728–1968. In particular, we may request, as a condition to be offered common stock, that Qualified Investors will each represent, warrant and certify to us and/or to anyone acting on our behalf: (i) that it is an investor falling within one of the categories listed in the First Addendum to the Israeli Securities Law, 5728–1968; (ii) which of the categories listed in the First Addendum to the Israeli Securities Law, 5728–1968 regarding Qualified Investors is applicable to it; (iii) that it will abide by all provisions set forth in the Israeli Securities Law, 5728–1968 and the regulations promulgated thereunder in connection with the offer to be issued common stock; (iv) that the shares of common stock that it will be issued are, subject to exemptions available under the Israeli Securities Law, 5728–1968: (a) for its own account; (b) for investment purposes only; and (c) not issued with a view to resale within the State of Israel, other than in accordance with the provisions of the Israeli Securities Law, 5728–1968; and (v) that it is willing to provide further evidence of its Qualified Investor status. Addressed Investors may have to submit written evidence in respect of their identity and may have to sign and submit a declaration containing, inter alia, the Addressed Investor’s name, address and passport number or Israeli identification number.

Japan

The offering has not been and will not be registered under the Financial Instruments and Exchange Law of Japan (Law No. 25 of 1948 of Japan, as amended), or FIEL, and the Initial Purchaser will not offer or sell any securities, directly or indirectly, in Japan or to, or for the benefit of, any resident of Japan (which term as used herein means, unless otherwise provided herein, any person resident in Japan, including any corporation or other entity organized under the laws of Japan), or to others for re-offering or resale, directly or indirectly, in Japan or to a resident of Japan, except pursuant to an exemption from the registration requirements of, and otherwise in compliance with, the FIEL and any other applicable laws, regulations and ministerial guidelines of Japan.

Singapore

This prospectus has not been and will not be lodged or registered with the Monetary Authority of Singapore.

Accordingly, this prospectus and any other document or material in connection with the offer or sale, or the invitation for subscription or purchase of the securities may not be issued, circulated or distributed, nor may the securities be offered or sold, or be made the subject of an invitation for subscription or purchase, whether directly or indirectly, to the public or any member of the public in Singapore other than (i) to an institutional investor under Section 274 of the Securities and Futures Act, Chapter 289 of Singapore, or the SFA, (ii) to a relevant person as defined under Section 275(2), or any person pursuant to Section 275(1A) of the SFA, and in accordance with the conditions, specified in Section 275 of the SFA, or (iii) otherwise pursuant to, and in accordance with the conditions of any other applicable provision of the SFA.

Where the securities are subscribed or purchased under Section 275 of the SFA by a relevant person which is:

- a corporation (which is not an accredited investor as defined under Section 4A of the SFA) the sole business of which is to hold investments and the entire share capital of which is owned by one or more individuals, each of whom is an accredited investor; or

- a trust (where the trustee is not an accredited investor) whose sole purpose is to hold investments and each beneficiary is an accredited investor,

shares, debentures and units of shares and debentures of that corporation or the beneficiaries' rights and interest in that trust shall not be transferable for six months after that corporation or that trust has acquired the Offer Shares under Section 275 of the SFA except:

- to an institutional investor under Section 274 of the SFA or to a relevant person defined in Section 275(2) of the SFA, or to any person pursuant to an offer that is made on terms that such shares, debentures and units of shares and debentures of that corporation or such rights and interest in that trust are acquired at a consideration of not less than \$200,000 (or its equivalent in a foreign currency) for each transaction, whether such amount is to be paid for in cash or by exchange of securities or other assets, and further for corporations, in accordance with the conditions, specified in Section 275 of the SFA;
- where no consideration is given for the transfer; or
- where the transfer is by operation of law.

Switzerland

The securities may not be publicly offered in Switzerland and will not be listed on the SIX Swiss Exchange, or SIX, or on any other stock exchange or regulated trading facility in Switzerland. This prospectus has been prepared without regard to the disclosure standards for issuance prospectuses under art. 652a or art. 1156 of the Swiss Code of Obligations or the disclosure standards for listing prospectuses under art. 27 ff. of the SIX Listing Rules or the listing rules of any other stock exchange or regulated trading facility in Switzerland. Neither this prospectus nor any other offering or marketing material relating to the securities or the offering may be publicly distributed or otherwise made publicly available in Switzerland.

Neither this prospectus nor any other offering or marketing material relating to the offering, the Company or the securities have been or will be filed with or approved by any Swiss regulatory authority. In particular, this prospectus will not be filed with, and the offer of securities will not be supervised by, the Swiss Financial Market Supervisory Authority and the offer of securities has not been and will not be authorized under the Swiss Federal Act on Collective Investment Schemes, or CISA. The investor protection afforded to acquirers of interests in collective investment schemes under the CISA does not extend to acquirers of securities.

United Kingdom

This prospectus is only being distributed to, and is only directed at, persons in the United Kingdom that are qualified investors within the meaning of Article 2(1)(e) of the Prospectus Directive that are also (i) investment professionals falling within Article 19(5) of the Financial Services and Markets Act 2000 (Financial Promotion) Order 2005, as amended, referred to herein as the Order, and/or (ii) high net worth entities falling within Article 49(2)(a) to (d) of the Order and other persons to whom it may lawfully be communicated. Each such person is referred to herein as a Relevant Person.

This prospectus and its contents are confidential and should not be distributed, published or reproduced (in whole or in part) or disclosed by recipients to any other persons in the United Kingdom. Any person in the United Kingdom that is not a Relevant Person should not act or rely on this document or any of its contents.

LEGAL MATTERS

The validity of the common stock being offered in this offering will be passed upon for us by Morgan, Lewis & Bockius LLP, Princeton, New Jersey. Certain legal matters related to this offering will be passed upon for the underwriters by Latham & Watkins LLP.

EXPERTS

Our financial statements as of December 31, 2016 and for the year then ended, and management's assessment of the effectiveness of internal control over financial reporting as of December 31, 2016 incorporated by reference into this prospectus have been so incorporated in reliance on the reports of Marcum LLP, independent registered public accounting firm, upon the authority of said firm as experts in auditing and accounting.

Our financial statements as of December 31, 2015 and 2014 and for the years then ended, incorporated by reference into this prospectus have been so incorporated in reliance on the reports of Weinberg & Company, P.A., independent registered public accounting firm, upon the authority of said firm as experts in auditing and accounting.

WHERE YOU CAN FIND MORE INFORMATION

This prospectus supplement and the accompanying prospectus form part of a registration statement on Form S-3 that we filed with the SEC. This prospectus supplement and the accompanying prospectus do not contain all of the information set forth in the registration statement and the exhibits to the registration statement or the documents incorporated by reference herein and therein. For further information with respect to us and the securities that we are offering under this prospectus supplement, we refer you to the registration statement and the exhibits and schedules filed as a part of the registration statement and the documents incorporated by reference herein and therein. You should rely only on the information contained in this prospectus supplement or the accompanying prospectus or incorporated by reference herein or therein. We have not authorized anyone else to provide you with different information. We are not making an offer of these securities in any state where the offer is not permitted. You should not assume that the information in this prospectus is accurate as of any date other than the date on the front page of this prospectus supplement, regardless of the time of delivery of this prospectus supplement or any sale of the securities offered hereby.

We file annual, quarterly and current reports, proxy statements and other information with the SEC. You may read and copy the registration statement, as well as any other document filed by us with the SEC, at the SEC's Public Reference Room at 100 F Street NE, Washington, D.C. 20549. You can also request copies of these documents by writing to the SEC and paying a fee for the copying cost. You may obtain information on the operation of the Public Reference Room by calling the SEC at (800) SEC-0330. The SEC maintains a website that contains reports, proxy statements and other information regarding issuers that file electronically with the SEC, including Iovance Biotherapeutics, Inc. The address of the SEC website is www.sec.gov.

We maintain a website at www.iovance.com. Information contained in or accessible through our website does not constitute a part of this prospectus.

INCORPORATION OF CERTAIN INFORMATION BY REFERENCE

The SEC allows us to “incorporate by reference” information into this prospectus supplement, which means that we can disclose important information to you by referring you to another document filed separately with the SEC. The SEC file number for the documents incorporated by reference in this prospectus is 001-36860. The documents incorporated by reference into this prospectus supplement contain important information that you should read about us.

The following documents are incorporated by reference into this document (other than the portions of these documents deemed to be “furnished” or not deemed to be “filed,” including the portions of these documents that are furnished under Item 2.02 or Item 7.01 of a Current Report on Form 8-K, including any exhibits included with such Items):

- our Annual Report on Form 10-K for the fiscal year ended December 31, 2016 filed with the SEC on March 9, 2017;
- our Quarterly Report on Form 10-Q for the three months ended March 31, 2017 filed with the SEC on May 3, 2017;
- our Quarterly Report on Form 10-Q for the six months ended June 30, 2017 filed with the SEC on August 3, 2017;
- our Quarterly Report on Form 10-Q for the nine months ended September 30, 2017 filed with the SEC on November 2, 2017;
- those portions of our Definitive Proxy Statement on Schedule 14A for our 2017 Annual Meeting of Stockholders filed with the SEC on April 20, 2017, as amended, that are incorporated by reference into our Annual Report on Form 10-K for the fiscal year ended December 31, 2016;
- our Current Reports on Form 8-K filed with the SEC on March 2, 2017; March 31, 2017; April 11, 2017; April 19, 2017; May 1, 2017; May 25, 2017; June 2, 2017; June 27, 2017; July 27, 2017; August 8, 2017; September 6, 2017; September 15, 2017; September 21, 2017; September 26, 2017; November 13, 2017; December 13, 2017; January 8, 2018; and January 24, 2018; and
- the description of our common stock contained in our registration statement on Form 8-A filed on February 25, 2015 pursuant to Section 12 of the Securities Exchange Act of 1934, as amended, as amended by a Form 8-A/A filed on July 27, 2017 and including any amendment or report filed for the purpose of updating such description.

We also incorporate by reference into this prospectus all documents (other than current reports furnished under Item 2.02 or Item 7.01 of Form 8-K and exhibits filed on such form that are related to such items) that are filed by us with the SEC pursuant to Sections 13(a), 13(c), 14 or 15(d) of the Securities Exchange Act of 1934, as amended, after the date of this prospectus supplement but prior to the termination of the offering. These documents include periodic reports, such as Annual Reports on Form 10-K, Quarterly Reports on Form 10-Q and Current Reports on Form 8-K, as well as proxy statements.

We will provide to each person, including any beneficial owner, to whom a prospectus is delivered, without charge upon written or oral request, a copy of any or all of the documents that are incorporated by reference into this prospectus but not delivered with the prospectus, including exhibits which are specifically incorporated by reference into such documents. Requests should be directed to: Iovance Biotherapeutics, Inc., Attn: Investor Relations, 999 Skyway Road, Suite 150, San Carlos, California 94070.

Any statement contained herein or in a document incorporated or deemed to be incorporated by reference into this document will be deemed to be modified or superseded for purposes of the document to the extent that a statement contained in this document or any other subsequently filed document that is deemed to be incorporated by reference into this document modifies or supersedes the statement.

PROSPECTUS

\$250,000,000

IOVANCE BIOTHERAPEUTICS, INC.

Common Stock

Preferred Stock

Debt Securities

Warrants

Units

We may offer and sell from time to time, in one or more offerings and on terms that we will determine at the time of each offering, shares of common stock, shares of preferred stock, debt securities and/or warrants, either separately, together with other securities covered by this prospectus or as units consisting of two or more of the securities covered by this prospectus. The debt securities, preferred stock and warrants may be convertible into or exercisable or exchangeable for common stock, preferred stock or debt securities. The aggregate offering price of all securities sold under this prospectus will not exceed \$250,000,000.

We will provide the specific terms of each offering of securities, including the price and the type and amount of securities to be offered and sold, in a supplement to this prospectus. You should read this prospectus and the prospectus supplement carefully before you invest.

We may offer and sell these securities directly to purchasers or to or through one or more underwriters, dealers and agents, and on a continuous or delayed basis. If we sell securities to or through underwriters, dealers or agents, we will include their names and the fees, commissions and discounts that they will receive, as well as the net proceeds to us, in the prospectus supplement. This prospectus may not be used to sell our securities unless it is accompanied by the prospectus supplement. The delivery of this prospectus together with a prospectus supplement relating to the offered securities shall not constitute an offer of any other securities covered by this prospectus.

Investing in our securities involves a high degree of risk. See “Risk Factors” on page 4 of this prospectus and in the applicable prospectus supplement for a discussion of risks that you should consider before you invest in our securities.

Our common stock is traded on The NASDAQ Global Market under the symbol “IOVA.” On December 28, 2017, the last reported sale price of our common stock on The NASDAQ Global Market was \$8.30 per share.

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 January 19, 2018.

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ABOUT THIS PROSPECTUS

This prospectus is a part of a registration statement on Form S-3 that we filed with the Securities and Exchange Commission (the “SEC”) utilizing a “shelf” registration process. Under the shelf registration process, we may sell any combination of the securities described in this prospectus in one or more transactions up to a total dollar amount of \$250,000,000.

The rules and regulations of the SEC allow us to omit from this prospectus certain information that is included in the registration statement. For further information about us and our securities, you should review the registration statement and the exhibits filed with the registration statement. In addition, the SEC allows us to incorporate by reference into this prospectus information in the reports and other documents that we file with the SEC, which means that we can disclose important information to you by referring you to those reports and other documents. The information incorporated by reference is considered to be part of this prospectus, and information that we later file with the SEC will automatically update and, where applicable, modify or supersede that information. You may read the registration statement (including its exhibits) and the reports and other documents that we file with the SEC at the SEC’s website, www.sec.gov, or at the SEC’s Public Reference Room described below under the heading “Where You Can Find More Information.”

This prospectus provides you with a general description of the securities we may offer. Each time we offer securities under this shelf registration, we will provide a prospectus supplement that will contain specific information about the terms of that offering. The prospectus supplement may also add, update or change information contained in this prospectus. You should read both this prospectus and any prospectus supplement together with the additional information described under the heading “Incorporation of Certain Information by Reference.” To the extent that any information in the prospectus supplement is inconsistent with the information in this prospectus, the information in the prospectus supplement will modify or supersede this prospectus.

This prospectus and the applicable prospectus supplement 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 the applicable prospectus supplement 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 the applicable prospectus supplement is accurate as of 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 as of any date subsequent to the date of the document incorporated by reference, even though this prospectus and any applicable prospectus supplement is delivered or securities are sold on a later date. Our business, financial condition, results of operations and prospects may have changed since those dates.

You should rely only on the information contained in this prospectus, in the applicable prospectus supplement and in any documents incorporated by reference into this prospectus and the applicable prospectus supplement. We have not authorized any salesperson, dealer or other person to provide you with information different from that contained in this prospectus, in the applicable prospectus supplement or in any documents incorporated by reference into this prospectus or the applicable prospectus supplement, and you are not entitled to rely upon any such different information.

Throughout this prospectus, the terms “Iovance,” “we,” “us,” “our,” and “our company” refer to Iovance Biotherapeutics, Inc., a Delaware corporation.

IOVANCE BIOTHERAPEUTICS, INC.**Overview**

We are a clinical-stage biopharmaceutical company focused on the development and commercialization of novel cancer immunotherapy products designed to harness the power of a patient's own immune system to eradicate cancer cells. Our lead program is an adoptive cell therapy utilizing tumor-infiltrating lymphocytes (TIL), which are T cells derived from patients' tumors. This is a platform technology that has already been applied to the treatment of metastatic melanoma and metastatic cervical cancer by the National Cancer Institute (NCI). We are investigating effectiveness of TIL therapy for the treatment of metastatic melanoma, squamous cell carcinoma of the head and neck, cervical carcinoma, and metastatic non-small cell lung cancer, as well as other oncology indications.

A patient's immune system, particularly their TIL, plays an important role in identifying and killing cancer cells. TIL product consist of a polyclonal population of T cells that can recognize a wide variety of cancer-specific mutations. TIL regimen targets a tumor through the polyclonal nature of the TIL product, and is able to overcome the hostile tumor microenvironment because of the non-myeloablative chemotherapy that is a component of TIL therapy and the nature of the TIL cells themselves. TIL therapy involves growing a patient's TIL outside the patient's body, or ex vivo, administering non-myeloablative chemotherapy, infusing the T cells back into the patient, followed up with an infusion of up to six doses of interleukin-2 (IL-2). By expanding a patient's TIL ex vivo away from the immunosuppressive tumor microenvironment, the T cells can rapidly proliferate. As a result, billions of TIL cells, when infused back into the patient, are better able to potentially eradicate tumors.

Manufacturing of TIL has typically taken 5 – 6 weeks and has yielded a non-cryopreserved TIL product. We have developed a new manufacturing method that reduces the duration of manufacture of the TIL product to 22 days, and allows for production of a cryopreserved TIL product. We refer to our new manufacturing method as Generation 2 (Gen 2) manufacturing. We own the intellectual property associated with Gen 2 manufacturing. In 2017, we selected Gen 2 as the manufacturing method for TIL product to be used in all of our ongoing and upcoming trials. The cryopreserved TIL product offers greater flexibility in scheduling the dosing of patients, reduces the period for patients to wait until they receive their TIL product infusion, and reduces the cost of manufacture.

We are pursuing metastatic melanoma as our first target indication because of the promising initial results in this indication generated by Dr. Steven Rosenberg, M.D., Ph.D., Chief of the Surgery Branch of the NCI, and the commercial opportunity inherent in the significant unmet need of this patient population. Melanoma is a common type of skin cancer, accounting for 87,110 patients diagnosed and 9,730 deaths in 2017 in the United States according to the American Cancer Society's Cancer Estimates for 2017. According to the NCI's Surveillance, Epidemiology and End Results (SEER) program, about 2 – 5% of patients with melanoma have metastatic disease. Patients with metastatic melanoma following treatment under the current standards of care have a particularly dire prognosis with very few curative treatment options.

We have an on-going Phase 2 clinical trial, C-144-01, of our lead product candidate, LN-144, TIL for the treatment of metastatic melanoma. This multicenter study is enrolling patients with melanoma whose disease has progressed following treatment with at least one systemic therapy, including anti-PD-1 and if BRAF mutated, a BRAF inhibitor. The trial is currently active at eleven U.S. sites. We anticipate initiating patient dosing in Europe during the first half of 2018. The purpose of the study is to evaluate the efficacy and safety of our autologous TIL product (LN-144). The trial's primary objective is to characterize the efficacy of LN-144. Secondary outcome measures for safety and efficacy of LN-144 include objective response and complete response rates. Additional secondary or exploratory endpoints may be evaluated as well. On December 13, 2017, we reported updated results from cohort 2 of the C-144-01 study. The data reported showed clinically-meaningful outcomes with a 40% Objective Response Rate (per RECIST v1.1), which included four partial responses observed in ten efficacy evaluable patients. The efficacy evaluable patients had a high tumor burden despite a median of 3.6 prior therapies including both anti-CTLA and PD-1 prior treatments. The most common side effects of any grade were pyrexia, anemia and decreased neutrophil count. Since we have decided to use our Gen 2 manufacturing process for all ongoing Phase 2 trials and in all future TIL clinical development in trials sponsored by us, Cohort 1 of the C-144-01 melanoma study will be closed to enrollment, and new patients will be enrolled in cohort 2.

We received orphan drug designation for LN-144 in the United States to treat malignant melanoma stages IIB-IV. This designation provides seven years of market exclusivity in the United States, subject to certain limited exceptions. However, the orphan drug designation does not convey any advantage in or shorten the duration of the regulatory review or approval process. On August 31, 2017, we were granted Fast Track designation by the U.S. Food and Drug Administration (FDA) for LN-144, TIL in advanced melanoma.

In addition to our ongoing trial in metastatic melanoma, we have initiated clinical trials of TIL therapy in cervical, and head and neck cancers. C-145-03 is a Phase 2, multicenter study that will enroll up to 47 patients and will assess the safety and efficacy of LN-145 for the treatment of patients with recurrent and/or metastatic squamous cell carcinoma of the head and neck. The trial has met the efficacy threshold for the first stage of the Simon's two-stage design and will therefore continue to enroll patients to the full sample size of 47 per protocol. We anticipate reporting early data from this study in 2018. C-145-04 is a Phase 2, multicenter study, designed as a Simon's two-stage design to enroll up to 47 patients and will assess the safety and efficacy of LN-145 for the treatment of patients with recurrent, metastatic, or persistent cervical carcinoma. The study is open for enrollment of patients in the United States and we anticipate the start of enrollment of patients in Europe in the first half of 2018. We have amended the protocol so that newly enrolled patients in both of these trials can be treated using TIL produced from our Gen 2 manufacturing process.

We are initiating our clinical development around non-small cell lung cancer (NSCLC) with two studies. One of the studies is an investigator sponsored study to be conducted at H. Lee Moffitt Cancer Center and Research Institute (Moffitt), and one will be sponsored by Iovance. We recently announced that patient enrollment has begun in the study in collaboration with researchers at Moffitt, Stand Up To Cancer, and other collaborators. Patients who are treatment naïve to prior anti-PD-1/PD-L1 with stage IV or recurrent NSCLC will be enrolled in a study combining TIL and nivolumab. The Iovance sponsored Phase 2 study in NSCLC who are PD-1 and PD-L1 naïve, in collaboration with MedImmune, the global biologics research and development arm of AstraZeneca, will initiate in the first half of 2018. The study with MedImmune will allow for enrollment with LN-145 alone or in combination with durvalumab. In the future, we plan to initiate additional indications alone or through collaborations.


We are also initiating clinical trials as part of our strategic alliance with The University of Texas M.D. Anderson Cancer Center in multiple solid tumor cancers using two different TIL manufacturing processes, including our Gen 2 manufacturing process. These multi-arm clinical trials will evaluate the safety and efficacy of TIL therapy in ovarian cancer, various sarcomas, and pancreatic cancer, and are expected to begin enrollment in 2018.

In June 2017 we reincorporated from Nevada to Delaware, and changed our name from "Lion Biotechnologies, Inc." to "Iovance Biotherapeutics, Inc."

Our current product candidate pipeline is summarized in the graphic below:

INDICATION	REGIMEN	N	PARTNER	PRECLINICAL	PHASE I	PHASE 2
Melanoma	Combination TIL ± TBI	101	NIH NATIONAL CANCER INSTITUTE			Trial completed, 54% ORR, 24% CR
Melanoma	Combination TIL + Yervoy		MOFFITT CANCER CENTER			Trial completed, publishing results
Melanoma	Combination TIL + Keytruda	170	NIH NATIONAL CANCER INSTITUTE			Enrolling
Melanoma	Combination TIL + Opdivo	12	MOFFITT CANCER CENTER		Enrolling	
Ocular (Uveal) Melanoma	TIL	23	NIH NATIONAL CANCER INSTITUTE			
Glioblastoma	TIL		Karolinska Institutet			
Pancreatic Cancer	TIL		Karolinska Institutet			
Ovarian, Sarcomas, Pancreatic	TIL		MD Anderson Cancer Network			Phase 2 trials to initiate in 2018
Non-small cell lung cancer	Combination TIL + Opdivo	18	MOFFITT CANCER CENTER		Enrolling	

Our current collaboration pipeline is summarized in the graphic below:

INDICATION	REGIMEN	N	PARTNER	PRECLINICAL	PHASE I	PHASE 2
Melanoma	TIL LN-144	60	—			Enrolling
Cervical Cancer	TIL LN-145	47	—			Enrolling
Head & Neck Cancer	TIL LN-145	47	—			Enrolling
Non-Small Cell Lung Cancer	TIL LN-145 vs TIL LN-145 + durvalumab	24	 MedImmune			Phase 2 trials to initiate in 2018

Corporate Information

Information concerning our company is contained in the documents that we file with the SEC as a reporting company under the Securities Exchange Act of 1934, as amended, which are accessible at www.sec.gov, and on our website at www.iovance.com. The public can also obtain copies of these filings by visiting the SEC's Public Reference Room at 100 F Street NE, Washington D.C. 20549, or by calling the SEC at 1-800-SEC-0330. The information contained on, or that can be accessed through, our website is not a part of this prospectus. Investors should not rely on any such information in deciding whether to purchase our common stock. We have included our website address in this prospectus solely as an inactive textual reference. Information on our website is not, and should not be considered, part of this prospectus.

Our principal executive offices are located at 999 Skyway Road, Suite 150, San Carlos, California 94070, and our telephone number is (650) 260-7120.

RISK FACTORS

Investment in any securities offered pursuant to this prospectus and the applicable prospectus supplement involves a high degree of risk. Prior to making a decision about investing in our securities, you should carefully consider the risk factors described in our most recent Annual Report on Form 10-K and Quarterly Report on Form 10-Q and in any subsequent Quarterly Reports on Form 10-Q or Current Reports on Form 8-K that we file with the SEC after the date of this prospectus, all of which are incorporated by reference into this prospectus. You should also carefully review all other information contained in or incorporated by reference into this prospectus and the applicable prospectus supplement, including the information contained below under the heading "Cautionary Note Regarding Forward-Looking Statements," as updated by our subsequent filings under the Securities Exchange Act of 1934, as amended. The occurrence of any of these risks might cause you to lose all or part of your investment in the offered securities.

CAUTIONARY NOTE REGARDING FORWARD-LOOKING STATEMENTS

This prospectus and the documents incorporated herein by reference contain forward-looking statements, and we anticipate that the applicable prospectus supplement will contain forward-looking statements. These statements relate to future events or to our future financial performance and involve known and unknown risks, uncertainties and other factors that may cause our actual results to be materially different from any future results expressed or implied by the forward-looking statements. In some cases, you can identify forward-looking statements by the use of words such as "believe," "anticipate," "intend," "plan," "estimate," "may," "could," "anticipate," "predict," or "expect" and similar expressions. You should not place undue reliance on forward-looking statements since they involve known and unknown risks, uncertainties and other factors that are, in many cases, beyond our control. Forward-looking statements are not guarantees of future performance. Actual events or results may differ materially from those discussed in the forward-looking statements as a result of various factors. Except as required by applicable law, we do not undertake any obligation to publicly update any forward-looking statements, whether as a result of new information, future developments or otherwise.

Important factors that could cause actual results to differ materially from those reflected in our forward-looking statements include, among others:

- our inability to obtain regulatory approval for, or successfully commercialize, our leading product candidate, LN-144, or our other product candidates;
- difficulty in enrolling patients in our clinical trials and uncertainty of clinical trial results;
- our inability to control the timing and some of the research and development activities of our third-party research institution collaborators relating to our product candidates;
- our history of operating losses and inability to become profitable;
- uncertainty and volatility in the price of our common stock;
- the costs and effects of existing and potential governmental investigations and litigation;
- our inability to meet the continued listing requirements of The NASDAQ Global Market;
- our inability to implement and maintain appropriate internal controls;
- uncertainty as to our employees' and independent contractors' compliance with regulatory standards and requirements and securities insider trading rules;
- dependence on the efforts of third parties to conduct and oversee our clinical trials for our product candidates, to manufacture clinical supplies of our product candidates and to commercialize our product candidates;
- the effect of government regulations on our business;
- a loss of any of our key management personnel;
- our inability to secure and maintain relationships with collaborators and contract manufacturers;
- our inability to develop or commercialize our product candidates due to intellectual property rights held by third parties;
- our inability to protect the confidentiality, privacy, or security of our data or our trade secrets; and
- our potential inability to access capital required to fund proposed operations.

All written and verbal forward-looking statements attributable to us or any person acting on our behalf are expressly qualified in their entirety by the cautionary statements contained or referred to in this section. We caution investors not to rely too heavily on the forward-looking statements we make or that are made on our behalf.

In addition, you should refer to the documents we have incorporated by reference for a discussion of other important factors that may cause our actual results to differ materially from those expressed or implied by our forward-looking statements. As a result of these factors, we cannot assure you that the forward-looking statements will prove to be accurate. Furthermore, if our forward-looking statements prove to be inaccurate, the inaccuracy may be material. In light of the significant uncertainties in these forward-looking statements, you should not regard these statements as a representation or warranty by us or any other person that we will achieve our objectives and plans in any specified time frame, or at all.

We may discuss certain of these risks and uncertainties in greater detail in any prospectus supplement under the heading "Risk Factors." Additional cautionary statements or discussions of risks and uncertainties that could affect our results or the achievement of the expectations described in forward-looking statements may also be contained in the documents we incorporate by reference into this prospectus, including our most recent Annual Report on Form 10-K and our Quarterly Report on Form 10-Q filed with the SEC.

RATIO OF EARNINGS TO FIXED CHARGES AND PREFERENCE DIVIDENDS

The following table sets forth our ratio of earnings, if any, to fixed charges for each of the periods presented:

	Year Ended December 31,					Nine Months Ended September 30,
	2016	2015	2014	2013	2012	2017
Ratio of earnings to fixed charges ⁽¹⁾	N/A	N/A	N/A	N/A	N/A	N/A

- (1) For each of these periods, earnings were insufficient to cover fixed charges and combined fixed charges and preferred stock dividends. The amounts of the insufficiencies were \$52,894,000, \$27,660,000, \$12,035,000, \$25,382,000 and \$3,308,000 for the years ended December 31, 2016, 2015, 2014, 2013 and 2012, respectively, and \$66,210,000 for the nine months ended September 30, 2017. We did not pay or accrue any preference dividends for any of the periods presented above.

USE OF PROCEEDS

Unless we state otherwise in the applicable prospectus supplement, we intend to use the net proceeds from the sale of securities described in this prospectus for the further development of our product candidates and for general corporate purposes, which may include, among other things, reducing indebtedness, acquiring other companies (although we currently have no agreement to acquire any other company), purchasing other assets or lines of business, repurchasing our common stock and making capital expenditures, as well as for working capital. Until we use the net proceeds for these purposes, we intend to invest the net proceeds in investment-grade, interest-bearing securities. We have not determined the amounts we plan to spend on any of these areas or the timing of these expenditures. As a result, our management will have broad discretion regarding the application of the net proceeds from the sale of securities described in this prospectus.

THE SECURITIES THAT WE MAY OFFER

We, directly or through underwriters, dealers or agents designated by us from time to time, may offer, issue and sell, together or separately, up to \$250,000,000 in the aggregate of:

- shares of our common stock, par value \$0.000041666 per share;
- shares of our preferred stock, par value \$0.001 per share;
- debt securities;
- warrants to purchase shares of our common stock, shares of our preferred stock and/or our debt securities; and
- units consisting of two or more of the securities described above.

The common stock, the preferred stock, the debt securities, the warrants and the units collectively are referred to in this prospectus as the “securities.”

We have summarized below the material terms of the various types of securities that we may offer. We will describe in the applicable prospectus supplement the detailed terms of the securities offered by that supplement. If indicated in the prospectus supplement, the terms of the offered securities may differ from the terms summarized below.

This prospectus may not be used to sell our securities unless it is accompanied by the applicable prospectus supplement.

DESCRIPTION OF SECURITIES

The following is a summary of all material characteristics of our capital stock as set forth in our certificate of incorporation and bylaws, as amended. Copies of these documents are filed or incorporated by reference as exhibits to the registration statement, of which this prospectus forms a part.

DESCRIPTION OF COMMON STOCK

We are presently authorized to issue 150,000,000 shares of \$0.000041666 par value common stock. As of September 30, 2017, we had issued and outstanding 71,954,843 shares of common stock.

We have one class of common stock. Holders of our common stock are entitled to one vote per share on all matters to be voted upon by stockholders and do not have cumulative voting rights in the election of directors. Holders of shares of common stock are entitled to receive on a pro rata basis such dividends, if any, as may be declared from time to time by our board of directors in its discretion from funds legally available for that use, subject to any preferential dividend rights of outstanding preferred stock. They are also entitled to share on a pro rata basis in any distribution to our common stockholders upon our liquidation, dissolution or winding up, subject to the prior rights of any outstanding preferred stock. Common stockholders do not have preemptive rights to subscribe to any additional stock issuances by us, and they do not have the right to require the redemption of their shares or the conversion of their shares into any other class of our stock. The rights, preferences and privileges of holders of common stock are subject to, and may be adversely affected by, the rights of the holders of any series of preferred stock that we may designate and issue in the future.

The following provisions of our certificate of incorporation and bylaws could have the effect of delaying or discouraging another party from acquiring control of us and could encourage persons seeking to acquire control of us to first negotiate with our board of directors:

- our certificate of incorporation and bylaws prohibit our stockholders from filling board vacancies, calling special stockholder meetings or taking action by written consent;
- our certificate of incorporation and bylaws require advance written notice of stockholder proposals and director nominations;
- our certificate of incorporation requires any action instituted against our officers or directors in connection with their service to us to be brought in the state of Delaware.
- our bylaws provide that our board of directors will establish the authorized number of directors from time to time;
- our bylaws provide for the removal of a director only with cause and by the affirmative vote of the holders of at least two-thirds of the shares then entitled to vote at an election of our directors;
- our certificate of incorporation does not permit cumulative voting in the election of directors; and
- our certificate of incorporation permits our board of directors to determine the rights, privileges and preferences of any new series of preferred stock, some of which could impede the ability of a person to acquire control of our company.

The transfer agent and registrar of our common stock is Continental Stock Transfer and Trust Company. The address of our transfer agent and registrar is 7 Battery Place, 8th Floor New York, New York 10004, and its telephone number is (212) 509-4000.

Our common stock is traded on The NASDAQ Global Market under the symbol "IOVA."

DESCRIPTION OF PREFERRED STOCK

We have authority to issue 50,000,000 shares of preferred stock, par value \$0.001 per share. As of September 30, 2017, we had issued and outstanding 1,694 shares of Series A Convertible Preferred Stock (the “Series A Preferred”) that are convertible into 847,000 shares of common stock, and 7,946,673 shares of Series B Preferred (the “Series B Preferred”) that are convertible into 7,946,673 shares of common stock. There are no other series of shares of our preferred stock currently issued or outstanding. The rights and restrictions granted or imposed on the shares of the Series A Preferred and Series B Preferred are described below.

Under our certificate of incorporation, our board of directors has the authority, without further action by stockholders, to designate one or more series of preferred stock and to fix the voting powers, designations, preferences, limitations, restrictions and relative rights granted to or imposed upon the preferred stock, including dividend rights, conversion rights, voting rights, rights and terms of redemption, liquidation preference and sinking fund terms, any or all of which may be preferential to or greater than the rights of the common stock.

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

We will describe in a prospectus supplement relating to any series of preferred stock being offered the following terms:

- the distinguishing designation of the series of preferred stock;
- the number of shares of the series of preferred stock offered, the liquidation preference per share and the offering price of the series;
- the dividend rate(s), period(s) or payment date(s) or method(s) of calculation applicable to the series of preferred stock;
- whether dividends are cumulative or non-cumulative and, if cumulative, the date from which dividends on the series of preferred stock will accumulate;
- the procedures for any auction and remarketing, if any, for the series of preferred stock;
- the provisions for a sinking fund, if any, for the series of preferred stock;
- the provision for redemption, if applicable, of the series of preferred stock;
- any listing of the series of preferred stock on any securities exchange;
- the terms and conditions, if applicable, upon which the series of preferred stock will be convertible into common stock, including the conversion price or manner of calculation and conversion period;
- voting rights, if any, of the series of preferred stock;
- a discussion of any material or special U.S. federal income tax considerations applicable to the series of preferred stock;
- the relative ranking and preferences of the series of preferred stock as to dividend rights and rights upon the liquidation, dissolution or winding up of our affairs;
- any limitations on issuance of any series of preferred stock ranking senior to or on a parity with the series of preferred stock being offered as to dividend rights and rights upon liquidation, dissolution or winding up of our affairs; and
- any other specific terms, preferences, rights, limitations or restrictions of the series of preferred stock.

Unless we specify otherwise in the applicable prospectus supplement, the preferred stock will rank, relating to dividends and upon our liquidation, dissolution or winding up:

- senior to all classes or series of our common stock and to all of our equity securities ranking junior to the preferred stock;
- on a parity with all of our equity securities the terms of which specifically provide that the equity securities rank on a parity with the preferred stock; and
- junior to all of our equity securities the terms of which specifically provide that the equity securities rank senior to the preferred stock.

Series A Preferred

In October 2013, we created a new class of preferred stock designated as “Series A Convertible Preferred Stock.” The shares of Series A Preferred have a stated value of \$1,000 per share and are initially convertible into shares of common stock at a price of \$2.00 per share (subject to adjustment as described below). The rights of the Series A Preferred are set forth in the Certificate of Designation Of Preferences And Rights Of Series A Convertible Preferred Stock (the “Series A Certificate of Designation”), which gives the holders of the Series A Preferred the following rights, preferences and privileges:

The Series A Preferred may, at the option of the holder, be converted at any time or from time to time into fully paid and non-assessable shares of common stock at the conversion price in effect at the time of conversion; provided, that a holder of Series A Preferred may at any given time convert only up to that number of shares of Series A Preferred so that, upon conversion, the aggregate beneficial ownership of the common stock (calculated pursuant to Rule 13d-3 of the Exchange Act) of such holder and all persons affiliated with such holder, is not more than 4.99% of the common stock then outstanding (subject to adjustment up to 9.99% solely at the holder’s discretion upon 60 days’ prior notice). The number of shares into which one share of Series A Preferred shall be convertible is determined by dividing the stated value of \$1,000 per share by the initial Conversion Price. The “Conversion Price” per share for the Series A Preferred is initially equal to \$2.00 (subject to appropriate adjustment for certain events, including stock splits, stock dividends, combinations, recapitalizations or other recapitalizations affecting the Series A Preferred).

The Series A Preferred will automatically be converted into common stock at the then-applicable Conversion Price (1) upon the written consent of the holders holding at least a majority of the outstanding shares of Series A Preferred or (2) if required by us to be able to list our common stock on a national securities exchange; provided, any such conversions will continue to be limited by, and subject to the beneficial ownership conversion limitations set forth above.

Except as otherwise required by law, the holders of shares of Series A Preferred do not have the right to vote on matters that come before the stockholders; provided, that we may not, without the prior written consent of a majority of the outstanding Series A Preferred: (1) amend, alter, or repeal any provision of our certificate of incorporation (including the Series A Certificate of Designation) or Bylaws in a manner adverse to the Series A Preferred; (2) create or authorize the creation of or issue any other security convertible into or exercisable for any equity security, having rights, preferences or privileges senior to or on parity with the Series A Preferred, or increase the authorized number of shares of Series A Preferred; or (3) enter into any agreement with respect to any of the foregoing.

In the event of any dissolution or winding up of our company, whether voluntary or involuntary, the proceeds would be paid *pari passu* among the holders of shares of our common stock, Series A Preferred and Series B Preferred, pro rata based on the number of shares held by each such holder, treating for this purpose all such securities as if they had been converted to common stock.

We may not declare, pay or set aside any dividends on shares of any class or series of our capital stock (other than dividends on shares of common stock payable in shares of common stock) unless the holders of the Series A Preferred shall first receive, or simultaneously receive, an equal dividend on each outstanding share of Series A Preferred.

Series B Preferred

In June 2016, we created a new class of Preferred Stock designated as “Series B Preferred Stock.” The rights of the Series B Preferred are set forth in the Certificate of Designation of Preferences and Rights of

Series B Preferred Stock (the “Series B Certificate of Designation”). A total of 11,500,000 shares of Series B Preferred are authorized for issuance under Series B Certificate of Designation. The shares of Series B Preferred have a stated value of \$4.75 per share and are convertible into shares of our common stock at a conversion price of \$4.75 per share, subject to certain adjustments.

Holders of Series B Preferred are entitled to dividends on an as-if-converted basis in the same form as any dividends actually paid on shares of our Series A Preferred or other securities. So long as any Series B Preferred remains outstanding, we may not redeem, purchase or otherwise acquire any material amount of our Series A Preferred or other securities.

The shares of Series B Preferred are convertible, at the option of each holder, at any time or from time to time into shares of our common stock at the conversion price in effect at the time of conversion, except that, subject to certain limited exceptions, no holder of Series B Preferred may convert the Series B Preferred if, after giving effect to the conversion, the holder and all affiliated persons would own beneficially more than 4.99% of our common stock (subject to adjustment to up to 9.99% solely at the holder’s discretion upon 61 days’ prior notice to us). The conversion price of \$4.75 is subject to appropriate adjustment in the event of a stock split, stock dividend, combination or other recapitalization affecting our common stock.

Holders of a majority of the outstanding shares of Series B Preferred are entitled to elect to convert all of the outstanding shares of the Series B Preferred into shares of common stock, subject to the beneficial ownership limitations of each holder set forth above.

Except as otherwise required by law, the holders of Series B Preferred have no right to vote on matters submitted to a vote of our stockholders. Without the prior written consent of a majority of the outstanding shares of Series B Preferred, however, we may not: (i) amend our certificate of incorporation (including the Series B Certificate of Designation) in a manner adverse to the Series B Preferred; (ii) create or authorize the creation of any other security convertible into or exercisable for any equity security ranking as to dividends, redemption or distribution of assets upon a liquidation senior to, the Series B Preferred, or increase the authorized number of shares of Series B Preferred; or (iii) enter into any agreement with respect to any of the foregoing.

In the event of the dissolution and winding up of our company, the proceeds available for distribution to our stockholders would be paid *pari passu* among the holders of shares of our common stock, Series A Preferred and Series B Preferred, pro rata based upon the number of shares held by each such holder, treating for this purpose all such securities as if they had been converted into our common stock.

DESCRIPTION OF DEBT SECURITIES

The following is a general description of the terms of debt securities we may issue from time to time unless we provide otherwise in the applicable prospectus supplement. Particular terms of any debt securities we offer will be described in the prospectus supplement relating to such debt securities.

As required by Federal law for all bonds and notes of companies that are publicly offered, any debt securities we issue will be governed by a document called an “indenture,” the form of which is filed as an exhibit to the registration statement of which this prospectus forms a part. We have summarized the general features of the debt securities to be governed by the indenture. The summary is not complete. An indenture is a contract between us and a financial institution acting as trustee on behalf of the holders of the debt securities, and is subject to and governed by the Trust Indenture Act of 1939, as amended. The trustee has two main roles. First, the trustee can enforce holders’ rights against us if we default. There are some limitations on the extent to which the trustee acts on holders’ behalf, described in the second paragraph under “Description of Debt Securities — Events of Default.” Second, the trustee performs certain administrative duties, such as sending interest and principal payments to holders.

Because this section is a summary, it does not describe every aspect of any debt securities we may issue or the indenture governing any such debt securities. Particular terms of any debt securities we offer will be described in the prospectus supplement relating to such debt securities, and we urge you to read the applicable executed indenture, which will be filed with the SEC at the time of any offering of debt securities, because it, and not this description, will define the rights of holders of such debt securities.

A prospectus supplement will describe the particular terms of any series of debt securities we may issue, including some or all of the following:

- the designation or title of the series of debt securities;
- the total principal amount of the series of debt securities, the denominations in which the offered debt securities will be issued and whether the offering may be reopened for additional securities of that series and on what terms;
- the percentage of the principal amount at which the series of debt securities will be offered;
- the date or dates on which principal will be payable;
- the rate or rates (which may be either fixed or variable) and/or the method of determining such rate or rates of interest, if any;
- the date or dates from which any interest will accrue, or the method of determining such date or dates, and the date or dates on which any interest will be payable;
- the terms for redemption, extension or early repayment, if any;
- the currencies in which the series of debt securities are issued and payable;
- whether the amount of payments of principal, interest or premium, if any, on a series of debt securities will be determined with reference to an index, formula or other method and how these amounts will be determined;
- the place or places of payment, transfer, conversion and/or exchange of the debt securities;
- the provision for any sinking fund;
- any restrictive covenants;
- events of default;
- whether the series of debt securities are issuable in certificated form;
- any provisions for legal defeasance or covenant defeasance;
- whether and under what circumstances we will pay additional amounts in respect of any tax, assessment or governmental charge and, if so, whether we will have the option to redeem the debt securities rather than pay the additional amounts (and the terms of this option);
- any provisions for convertibility or exchangeability of the debt securities into or for any other securities;
- whether the debt securities are subject to subordination and the terms of such subordination;
- any listing of the debt securities on any securities exchange;
- if applicable, a discussion of certain U.S. Federal income tax considerations, including those related to original issue discount, if applicable; and
- any other material terms.

The debt securities may be secured or unsecured obligations. Unless the prospectus supplement states otherwise, principal, interest and premium, if any, will be paid by us in immediately available funds.

General

The indenture may provide that any debt securities proposed to be sold under this prospectus and the applicable prospectus supplement relating to such debt securities (“offered debt securities”) and any debt securities issuable upon conversion or exchange of other offered securities (“underlying debt securities”) may be issued under the indenture in one or more series.

For purposes of this prospectus, any reference to the payment of principal of, or interest or premium, if any, on, debt securities will include additional amounts if required by the terms of the debt securities.

Debt securities issued under an indenture, when a single trustee is acting for all debt securities issued under the indenture, are called the “indenture securities.” The indenture may also provide that there may be more than one trustee thereunder, each with respect to one or more different series of securities issued thereunder. See “Description of Debt Securities — Resignation of Trustee” below. At a time when two or more trustees are acting under an indenture, each with respect to only certain series, the term “indenture securities” means the one or more series of debt securities with respect to which each respective trustee is acting. In the event that there is more than one trustee under an indenture, the powers and trust obligations of each trustee described in this prospectus will extend only to the one or more series of indenture securities for which it is trustee. If two or more trustees are acting under an indenture, then the indenture securities for which each trustee is acting would be treated as if issued under separate indentures.

We refer you to the applicable prospectus supplement relating to any debt securities we may issue from time to time for information with respect to any deletions from, modifications of or additions to the Events of Default or covenants that are described below, including any addition of a covenant or other provision providing event risk or similar protection, that will be applicable with respect to such debt securities.

We have the ability to issue indenture securities with terms different from those of indenture securities previously issued and, without the consent of the holders thereof, to reopen a previous issue of a series of indenture securities and issue additional indenture securities of that series unless the reopening was restricted when that series was created.

Conversion and Exchange

If any debt securities are convertible into or exchangeable for other securities, the related prospectus supplement will explain the terms and conditions of the conversion or exchange, including the conversion price or exchange ratio (or the calculation method), the conversion or exchange period (or how the period will be determined), if conversion or exchange will be mandatory or at the option of the holder or us, provisions for adjusting the conversion price or the exchange ratio and provisions affecting conversion or exchange in the event of the redemption of the underlying debt securities. These terms may also include provisions under which the number or amount of other securities to be received by the holders of the debt securities upon conversion or exchange would be calculated according to the market price of the other securities as of a time stated in the prospectus supplement.

Payment and Paying Agents

We will pay interest to the person listed in the applicable trustee’s records as the owner of the debt security at the close of business on a particular day in advance of each due date for interest, even if that person no longer owns the debt security on the interest due date. That day, often approximately two weeks in advance of the interest due date, is called the “record date.” Because we will pay all the interest for an interest period to the holders on the record date, holders buying and selling debt securities must work out between themselves the appropriate purchase price. The most common manner is to adjust the sales price of the debt securities to prorate interest fairly between buyer and seller based on their respective ownership periods within the particular interest period. This prorated interest amount is called “accrued interest.”

Events of Default

Holders of debt securities of any series will have rights if an Event of Default occurs in respect of the debt securities of such series and is not cured, as described later in this subsection. The term “Event of Default” in respect of the debt securities of any series means any of the following:

- we do not pay the principal of, or any premium on, a debt security of the series on its due date;
- we do not pay interest on a debt security of the series within 30 days of its due date;
- we do not deposit any sinking fund payment in respect of debt securities of the series on its due date and we do not cure this default within five days;
- we remain in breach of a covenant in respect of debt securities of the series for 90 days after we receive a written notice of default stating we are in breach. The notice must be sent by either the trustee or holders of at least 25% of the principal amount of debt securities of the series;

- we file for bankruptcy or certain other events of bankruptcy, insolvency or reorganization occur; and
- any other Event of Default occurs in respect of debt securities of the series described in the prospectus supplement.

An Event of Default for a particular series of debt securities does not necessarily constitute an Event of Default for any other series of debt securities issued under the same or any other indenture. The trustee may withhold notice to the holders of debt securities of any default, except in the payment of principal, premium or interest, if it considers the withholding of notice to be in the best interests of the holders.

Remedies if an Event of Default Occurs

If an Event of Default has occurred and has not been cured or waived, the trustee or the holders of not less than 25% in principal amount of the debt securities of the affected series may declare the entire principal amount of all the debt securities of that series to be due and immediately payable. This is called a declaration of acceleration of maturity. A declaration of acceleration of maturity may be canceled by the holders of a majority in principal amount of the debt securities of the affected series if the default is cured or waived and certain other conditions are satisfied.

Except in cases of default, where the trustee has some special duties, the trustee typically is not required to take any action under an indenture at the request of any holders unless the holders offer the trustee reasonable protection from expenses and liability (called an “indemnity”). If reasonable indemnity is provided, the holders of a majority in principal amount of the outstanding debt securities of the relevant series may direct the time, method and place of conducting any lawsuit or other formal legal action seeking any remedy available to the trustee. The trustee may refuse to follow those directions in certain circumstances.

Before a holder is allowed to bypass the trustee and bring its own lawsuit or other formal legal action or take other steps to enforce its rights or protect its interests relating to any debt securities, the following must occur:

- the holder must give the trustee written notice that an Event of Default has occurred and remains uncured;
- the holders of at least 25% in principal amount of all outstanding debt securities of the relevant series must make a written request that the trustee take action because of the default and must offer reasonable indemnity to the trustee against the cost and other liabilities of taking that action;
- the trustee must not have taken action for 60 days after receipt of the above notice and offer of indemnity; and
- the holders of a majority in principal amount of the debt securities must not have given the trustee a direction inconsistent with the above notice during that 60-day period.

However, a holder is entitled at any time to bring a lawsuit for the payment of money due on its debt securities on or after the due date. Each year, we will furnish to each trustee a written statement of certain of our officers certifying that to their knowledge we are in compliance with the indenture and the debt securities, or else specifying any default.

Waiver of Default

The holders of a majority in principal amount of the relevant series of debt securities may waive a default for all such series of debt securities. If this happens, the default will be treated as if it had not occurred. No one can waive a payment default on a holder’s debt security, however, without the holder’s approval.

Merger or Consolidation

Under the terms of an indenture, we may be permitted to consolidate or merge with another entity. We may also be permitted to sell all or substantially all of our assets to another entity. However, typically we may not take any of these actions unless all the following conditions are met:

- if we do not survive such transaction or we convey, transfer or lease our properties and assets substantially as an entirety, the acquiring company must be a corporation, limited liability company, partnership or trust, or other corporate form, organized under the laws of any state of the United States or the District of Columbia, and such company must agree to be legally responsible for our debt securities, and, if not already subject to the jurisdiction of any state of the United States or the District of Columbia, the new company must submit to such jurisdiction for all purposes with respect to the debt securities and appoint an agent for service of process;
- alternatively, we must be the surviving company;
- immediately after the transaction no Event of Default will exist;
- we must deliver certain certificates and documents to the trustee; and
- we must satisfy any other requirements specified in the prospectus supplement relating to a particular series of debt securities.

Modification or Waiver

There are three types of changes we may make to an indenture and the debt securities issued thereunder.

Changes Requiring Approval

First, there are changes that we cannot make to debt securities without specific approval of all of the holders. The following is a list of the types of changes that may require specific approval:

- change the stated maturity of the principal or rate of interest on a debt security;
- reduce any amounts due on a debt security;
- reduce the amount of principal payable upon acceleration of the maturity of a security following a default;
- at any time after a change of control has occurred, reduce any premium payable upon a change of control;
- change the place or currency of payment on a debt security (except as otherwise described in the prospectus or prospectus supplement);
- impair the right of holders to sue for payment;
- adversely affect any right to convert or exchange a debt security in accordance with its terms;
- reduce the percentage of holders of debt securities whose consent is needed to modify or amend the indenture;
- reduce the percentage of holders of debt securities whose consent is needed to waive compliance with certain provisions of the indenture or to waive certain defaults;
- modify any other aspect of the provisions of the indenture dealing with supplemental indentures, modification and waiver of past defaults, changes to the quorum or voting requirements or the waiver of certain covenants; and
- change any obligation we have to pay additional amounts.

Changes Not Requiring Approval

The second type of change does not require any vote by the holders of the debt securities. This type is limited to clarifications and certain other changes that would not adversely affect holders of the outstanding debt securities in any material respect, including the addition of covenants and guarantees. We also do not need any approval to make any change that affects only debt securities to be issued under the indenture after the change takes effect.

Changes Requiring Majority Approval

Any other change to the indenture and the debt securities may require the following approval:

- if the change affects only one series of debt securities, it must be approved by the holders of a majority in principal amount of that series; and
- if the change affects more than one series of debt securities issued under the same indenture, it must be approved by the holders of a majority in principal amount of all of the series affected by the change, with all affected series voting together as one class for this purpose.

The holders of a majority in principal amount of all of the series of debt securities issued under an indenture, voting together as one class for this purpose, may waive our compliance obligations with respect to some of our covenants in that indenture. However, we cannot obtain a waiver of a payment default or of any of the matters covered by the bullet points included above under “Description of Debt Securities — Modification or Waiver — Changes Requiring Approval.”

Further Details Concerning Voting

When taking a vote on proposed changes to the indenture and the debt securities, we expect to use the following rules to decide how much principal to attribute to a debt security:

- for original issue discount securities, we will use the principal amount that would be due and payable on the voting date if the maturity of these debt securities were accelerated to that date because of a default;
- for debt securities whose principal amount is not known (for example, because it is based on an index), we will use a special rule for that debt security described in the related prospectus supplement; and
- for debt securities denominated in one or more foreign currencies, we will use the U.S. dollar equivalent.

Debt securities will not be considered outstanding, and therefore not eligible to vote, if we have deposited or set aside in trust money for their payment or redemption. Debt securities will also not be eligible to vote if they have been fully defeased as described later under “Description of Debt Securities — Defeasance — Legal Defeasance.”

We generally will be entitled to set any day as a record date for the purpose of determining the holders of outstanding indenture securities that are entitled to vote or take other action under the indenture. If we set a record date for a vote or other action to be taken by holders of one or more series, that vote or action may be taken only by persons who are holders of outstanding indenture securities of those series on the record date and must be taken within 11 months following the record date.

Book-entry and other indirect holders will need to consult their banks or brokers for information on how approval may be granted or denied if we seek to change the indenture or the debt securities or request a waiver.

Defeasance

The following provisions will be applicable to each series of debt securities unless we state in the applicable prospectus supplement that the provisions of covenant defeasance and legal defeasance will not be applicable to that series.

Covenant Defeasance

We can make the deposit described below and be released from some of the restrictive covenants in the indenture under which the particular series was issued. This is called “covenant defeasance.” In that event, the holders would lose the protection of those restrictive covenants but would gain the protection of having money and government securities set aside in trust to repay holders’ debt securities. If applicable, a holder also would be released from the subordination provisions described under “Description of Debt Securities — Indenture Provisions — Subordination” below. In order to achieve covenant defeasance, we must do the following:

- If the debt securities of the particular series are denominated in U.S. dollars, we must deposit in trust for the benefit of all holders of such debt securities a combination of money and U.S. government or U.S. government agency notes or bonds that will generate enough cash to make interest, principal and any other payments on the debt securities on their various due dates;
- We may be required to deliver to the trustee a legal opinion of our counsel confirming that, under current U.S. Federal income tax law, we may make the above deposit without causing the holders to be taxed on the debt securities any differently than if we did not make the deposit and just repaid the debt securities ourselves at maturity; and
- We must deliver to the trustee certain documentation stating that all conditions precedent to covenant defeasance have been complied with.

If we accomplish covenant defeasance, holders can still look to us for repayment of the debt securities if there were a shortfall in the trust deposit or the trustee is prevented from making payment. In fact, if one of the remaining Events of Default occurred (such as our bankruptcy) and the debt securities became immediately due and payable, there might be a shortfall. Depending on the event causing the default, holders may not be able to obtain payment of the shortfall.

Legal Defeasance

As described below, we can legally release ourselves from all payment and other obligations on the debt securities of a particular series (called “legal defeasance”), (1) if there is a change in U.S. Federal tax law that allows us to effect the release without causing the holders to be taxed any differently than if the release had not occurred, and (2) if we put in place the following other arrangements for holders to be repaid:

- If the debt securities of the particular series are denominated in U.S. dollars, we must deposit in trust for the benefit of all holders of such debt securities a combination of money and U.S. government or U.S. government agency notes or bonds that will generate enough cash to make interest, principal and any other payments on the debt securities on their various due dates;
- We may be required to deliver to the trustee a legal opinion confirming that there has been a change in current U.S. Federal tax law or an Internal Revenue Service ruling that allows us to make the above deposit without causing the holders to be taxed on the debt securities any differently than if we did not make the deposit and just repaid the debt securities ourselves at maturity. Under current U.S. Federal tax law, the deposit and our legal release from the debt securities would be treated as though we paid each holder its share of the cash and notes or bonds at the time the cash and notes or bonds were deposited in trust in exchange for its debt securities and holders would recognize gain or loss on the debt securities at the time of the deposit; and
- We must deliver to the trustee a legal opinion and officers’ certificate stating that all conditions precedent to legal defeasance have been complied with.

If we ever did accomplish legal defeasance, as described above, holders would have to rely solely on the trust deposit for repayment of the debt securities. Holders could not look to us for repayment in the unlikely event of any shortfall. Conversely, the trust deposit would most likely be protected from claims of our lenders and other creditors if we ever became bankrupt or insolvent. If applicable, holders would also be released from the subordination provisions described later under “Description of Debt Securities — Indenture Provisions — Subordination.”

Resignation of Trustee

Each trustee may resign or be removed with respect to one or more series of indenture securities provided that a successor trustee is appointed to act with respect to such series. In the event that two or more persons are acting as trustee with respect to different series of indenture securities under the indenture, each of the trustees will be a trustee of a trust separate and apart from the trust administered by any other trustee.

Indenture Provisions — Subordination

Upon any distribution of our assets upon our dissolution, winding up, liquidation or reorganization, the payment of the principal of (and premium, if any) and interest on any indenture securities denominated as subordinated debt securities is to be subordinated to the extent provided in the indenture in right of payment to the prior payment in full of all Senior Indebtedness (defined below), but our obligation to holders to make payment of the principal of (and premium, if any) and interest on such subordinated debt securities will not otherwise be affected. In addition, no payment on account of principal (or premium, if any), interest or sinking fund, if any, may be made on such subordinated debt securities at any time unless full payment of all amounts due in respect of the principal (and premium, if any), interest and sinking fund, if any, on Senior Indebtedness has been made or duly provided for in money or money's worth.

In the event that, notwithstanding the foregoing, any payment from us is received by the trustee in respect of subordinated debt securities or by the holders of any of such subordinated debt securities before all Senior Indebtedness is paid in full, the payment or distribution must be paid over to the holders of the Senior Indebtedness or on their behalf for application to the payment of all the Senior Indebtedness remaining unpaid until all the Senior Indebtedness has been paid in full, after giving effect to any concurrent payment or distribution to the holders of the Senior Indebtedness. Subject to the payment in full of all Senior Indebtedness, the holders of such subordinated debt securities will be subrogated to the rights of the holders of the Senior Indebtedness to the extent of payments made to the holders of the Senior Indebtedness out of the distributive share of such subordinated debt securities.

By reason of this subordination, in the event of a distribution of our assets upon our insolvency, certain of our senior creditors may recover more, ratably, than holders of any subordinated debt securities. The related indenture will provide that these subordination provisions will not apply to money and securities held in trust under the defeasance provisions of the indenture.

“Senior Indebtedness” will be defined in an applicable indenture as the principal of (and premium, if any) and unpaid interest on:

- our indebtedness (including indebtedness of others guaranteed by us), whenever created, incurred, assumed or guaranteed, for money borrowed (other than indenture securities issued under the indenture and denominated as subordinated debt securities), unless in the instrument creating or evidencing the same or under which the same is outstanding it is provided that this indebtedness is not senior or prior in right of payment to the subordinated debt securities; and
- renewals, extensions, modifications and refinancings of any of such indebtedness.

The prospectus supplement accompanying any series of indenture securities denominated as subordinated debt securities will set forth the approximate amount of our Senior Indebtedness outstanding as of a recent date.

Trustee

We intend to name the indenture trustee for each series of indenture securities in the related prospectus supplement.

Certain Considerations Relating to Foreign Currencies

Debt securities denominated or payable in foreign currencies may entail significant risks. These risks include the possibility of significant fluctuations in the foreign currency markets, the imposition or modification of foreign exchange controls and potential illiquidity in the secondary market. These risks will vary depending upon the currency or currencies involved and will be more fully described in the applicable prospectus supplement.

DESCRIPTION OF WARRANTS

We may issue warrants for the purchase of shares of our common stock, preferred stock or debt securities. We may issue warrants independently or together with other securities, and the warrants may be attached to or separate from any offered securities. If a series of warrants will be issued under a separate warrant agreement to be entered into between us and the investors or a warrant agent, we will so specify in the applicable prospectus supplement. The following summary of the material provisions of the warrants and warrant agreements is subject to, and qualified in its entirety by reference to, all the provisions of the warrants and any warrant agreement applicable to a particular series of warrants. The terms of any warrants offered under a prospectus supplement may differ from the terms described below. We urge you to read the applicable prospectus supplement, as well as the complete warrants and warrant agreements that contain the terms of the warrants.

The material terms of any issue of warrants will be described in the prospectus supplement relating to the issue. Those terms may include:

- the number of shares of common stock or preferred stock purchasable upon the exercise of warrants to purchase such shares and the price at which such number of shares may be purchased upon such exercise;
- a summary of the designation and terms (including, without limitation, liquidation, dividend, conversion and voting rights) of the series of preferred stock purchasable upon exercise of warrants to purchase preferred stock as set forth in the certificate of designation for such series of preferred stock;
- the principal amount of debt securities that may be purchased upon exercise of a debt warrant and the exercise price for the warrants, which may be payable in cash, securities or other property;
- the date, if any, on and after which the warrants and the related debt securities, preferred stock or common stock will be separately transferable;
- the terms of any rights to redeem or call the warrants;
- the date on which the right to exercise the warrants will commence and the date on which the right will expire;
- U.S. federal income tax consequences applicable to the warrants; and
- any additional terms of the warrants, including terms, procedures, and limitations relating to the exchange, exercise and settlement of the warrants.

Each warrant will entitle its holder to purchase the principal amount of debt securities or the number of shares of preferred stock or common stock at the exercise price set forth in, or calculable as set forth in, the applicable prospectus supplement. Unless we otherwise specify in the applicable prospectus supplement, holders of the warrants may exercise the warrants at any time up to the specified time on the expiration date that we set forth in the applicable prospectus supplement. After the close of business on the expiration date, unexercised warrants will become void.

A holder of warrant certificates may exchange them for new warrant certificates of different denominations, present them for registration of transfer and exercise them at the corporate trust office of the warrant agent or any other office indicated in the applicable prospectus supplement. Until any warrants to purchase debt securities are exercised, the holder of the warrants will not have any rights of holders of the debt securities that can be purchased upon exercise, including any rights to receive payments of principal, premium or interest on the underlying debt securities or to enforce covenants in the applicable indenture. Until any warrants to purchase common stock or preferred stock are exercised, the holders of the warrants will not have any rights of holders of the underlying common stock or preferred stock, including any rights to receive dividends or payments upon any liquidation, dissolution or winding up on the common stock or preferred stock, if any.

DESCRIPTION OF UNITS

We may issue units consisting of any combination of the other types of securities offered under this prospectus in one or more series. We may elect to evidence each series of units by unit certificates that we will issue under a separate unit agreement. We may enter into unit agreements with a unit agent. Each unit agent will be a bank or trust company that we select. We will indicate the name and address of the unit agent in the applicable prospectus supplement relating to a particular series of units.

The following description, together with the additional information included in any applicable prospectus supplement, summarizes the general features of the units that we may offer under this prospectus. You should read any prospectus supplement related to the series of units being offered, as well as the complete unit agreements that contain the terms of the units. Specific unit agreements will contain additional important terms, and we will file as an exhibit to the registration statement of which this prospectus is a part, or will incorporate by reference from another report that we file with the SEC, the form of each unit agreement relating to units offered under this prospectus.

If we offer any units, certain terms of that series of units will be described in the applicable prospectus supplement, including, without limitation, the following, as applicable:

- the title of the series of units;
- identification and description of the separate constituent securities comprising the units;
- the price or prices at which the units will be issued;
- the date, if any, on and after which the constituent securities comprising the units will be separately transferable;
- a discussion of certain U.S. federal income tax considerations applicable to the units; and
- any other material terms of the units and their constituent securities.

PLAN OF DISTRIBUTION

We may sell the securities covered by this prospectus from time to time pursuant to underwritten public offerings, negotiated transactions, block trades or a combination of these methods or through underwriters or dealers, through agents and/or directly to one or more purchasers. The securities may be distributed from time to time in one or more transactions:

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

Each time that we sell securities covered by this prospectus, we will provide a prospectus supplement or supplements that will describe the method of distribution and set forth the terms and conditions of the offering of such securities, including the offering price of the securities and the proceeds to us, if applicable.

Offers to purchase the securities being offered by this prospectus may be solicited directly. Agents may also be designated to solicit offers to purchase the securities from time to time. Any agent involved in the offer or sale of our securities will be identified in a prospectus supplement.

If a dealer is utilized in the sale of the securities being offered by this prospectus, the securities will be sold to the dealer, as principal. The dealer may then resell the securities to the public at varying prices to be determined by the dealer at the time of resale.

If an underwriter is utilized in the sale of the securities being offered by this prospectus, an underwriting agreement will be executed with the underwriter at the time of sale and the name of any underwriter will be provided in the prospectus supplement that the underwriter will use to make resales of the securities to the public. In connection with the sale of the securities, we or the purchasers of securities for whom the underwriter may act as agent, may compensate the underwriter in the form of underwriting

discounts or commissions. The underwriter may sell the securities to or through dealers, and those dealers may receive compensation in the form of discounts, concessions or commissions from the underwriters and/or commissions from the purchasers for which they may act as agent. Unless otherwise indicated in a prospectus supplement, an agent will be acting on a best efforts basis and a dealer will purchase securities as a principal, and may then resell the securities at varying prices to be determined by the dealer.

Any compensation paid to underwriters, dealers or agents in connection with the offering of the securities, and any discounts, concessions or commissions allowed by underwriters to participating dealers, will be described in the applicable prospectus supplement. Underwriters, dealers and agents participating in the distribution of the securities may be deemed to be underwriters within the meaning of the Securities Act of 1933, as amended (the "Securities Act"), and any discounts and commissions received by them and any profit realized by them on resale of the securities may be deemed to be underwriting discounts and commissions. We may enter into agreements to indemnify underwriters, dealers and agents against civil liabilities, including liabilities under the Securities Act, or to contribute to payments they may be required to make in respect thereof and to reimburse those persons for certain expenses.

Any common stock issued by us will be traded on The NASDAQ Global Market unless we specify otherwise in the prospectus supplement, but any other securities may or may not be publicly traded or listed on a national securities exchange. To facilitate the offering of securities, certain persons participating in the offering may engage in transactions that stabilize, maintain or otherwise affect the price of the securities. This may include over-allotments or short sales of the securities, which involve the sale by persons participating in the offering of more securities than were sold to them. In these circumstances, these persons would cover such over-allotments or short positions by making purchases in the open market or by exercising their over-allotment option, if any. In addition, these persons may stabilize or maintain the price of the securities by bidding for or purchasing securities in the open market or by imposing penalty bids, whereby selling concessions allowed to dealers participating in the offering may be reclaimed if securities sold by them are repurchased in connection with stabilization transactions. The effect of these transactions may be to stabilize or maintain the market price of the securities at a level above that which might otherwise prevail in the open market. These transactions may be discontinued at any time.

If indicated in the applicable prospectus supplement, underwriters or other persons acting as agents may be authorized to solicit offers by institutions or other suitable purchasers to purchase the securities at the public offering price set forth in the prospectus supplement, pursuant to delayed delivery contracts providing for payment and delivery on the date or dates stated in the prospectus supplement. These purchasers may include, among others, commercial and savings banks, insurance companies, pension funds, investment companies and educational and charitable institutions. Delayed delivery contracts will be subject to the condition that the purchase of the securities covered by the delayed delivery contracts will not at the time of delivery be prohibited under the laws of any jurisdiction in the United States to which the purchaser is subject. The underwriters and agents will not have any responsibility with respect to the validity or performance of these contracts.

We may engage in at-the-market offerings into an existing trading market in accordance with Rule 415(a)(4) under the Securities Act. In addition, we may enter into derivative transactions with third parties, or sell securities not covered by this prospectus to third parties in privately negotiated transactions. If the applicable prospectus supplement so indicates, in connection with those derivatives, the third parties may sell securities covered by this prospectus and the applicable prospectus supplement, including in short sale transactions. If so, the third party may use securities pledged by us or borrowed from us or others to settle those sales or to close out any related open borrowings of stock, and may use securities received from us in settlement of those derivatives to close out any related open borrowings of stock. The third party in such sale transactions will be an underwriter and, if not identified in this prospectus, will be named in the applicable prospectus supplement. In addition, we may otherwise loan or pledge securities to a financial institution or other third party that in turn may sell the securities short using this prospectus and an applicable prospectus supplement. Such financial institution or other third party may transfer its economic short position to investors in our securities or in connection with a concurrent offering of other securities.

The specific terms of any lock-up provisions in respect of any given offering will be described in the applicable prospectus supplement.

The underwriters, dealers and agents may engage in transactions with us, or perform services for us, in the ordinary course of business for which they receive compensation.

LEGAL MATTERS

The validity of the securities offered by this prospectus has been passed upon for us by TroyGould PC, Los Angeles, California, and Morgan, Lewis & Bockius LLP, New York, New York. Some of the attorneys at TroyGould PC own shares of our common stock constituting in the aggregate less than 1% of our outstanding shares of common stock. Additional legal matters may be passed upon for us or any underwriters, dealers or agents by counsel that we will name in the applicable prospectus supplement.

EXPERTS

Our financial statements as of December 31, 2016 and for the year then ended, and management's assessment of the effectiveness of internal control over financial reporting as of December 31, 2016 incorporated by reference into this prospectus have been so incorporated in reliance on the reports of Marcum LLP, independent registered public accounting firm, upon the authority of said firm as experts in auditing and accounting.

Our financial statements as of December 31, 2015 and 2014 and for the years then ended, incorporated by reference into this prospectus have been so incorporated in reliance on the reports of Weinberg & Company, P.A., independent registered public accounting firm, upon the authority of said firm as experts in auditing and accounting.

WHERE YOU CAN FIND MORE INFORMATION

We are subject to the information and periodic reporting requirements of the Securities Exchange Act of 1934, as amended (the "Exchange Act") and, in accordance with that act, file periodic reports and other information with the SEC. The periodic reports and other information filed by us are available for inspection and copying at prescribed rates at the SEC's Public Reference Room at 100 F Street, N.E., Washington, D.C. 20549. Please call the SEC at 1-800-SEC-0330 for further information about the operation of the SEC's Public Reference Room. The SEC also maintains an Internet site that contains all reports and other information that we file electronically with the SEC. The address of that website is www.sec.gov.

This prospectus is part of a registration statement on Form S-3 that we have filed with the SEC under the Securities Act for the securities offered under this prospectus (the "Form S-3 Registration Statement"). The Form S-3 Registration Statement, including the exhibits to the Form S-3 Registration Statement, contains additional information about us and the securities offered by this prospectus. The rules and regulations of the SEC allow us to omit from this prospectus certain information that is included in the Form S-3 Registration Statement. For further information about us and our securities, you should review the Form S-3 Registration Statement and the exhibits filed with the Form S-3 Registration Statement.

INCORPORATION OF CERTAIN INFORMATION BY REFERENCE

The SEC allows us to incorporate into this prospectus by reference the information we file with it, which means that we can disclose important information to you by referring you to the documents containing that information. The information incorporated by reference is considered to be part of this prospectus, and information that we later file with the SEC will automatically update and, where applicable, modify or supersede that information.

We incorporate by reference the following documents previously filed with the SEC:

- our Annual Report on Form 10-K for the year ended December 31, 2016 filed with the SEC on March 9, 2017;
- the information included in our definitive proxy statement on Schedule 14A for our 2017 Annual Meeting of Stockholders, filed with the SEC on April 20, 2017, to the extent incorporated by reference in Part III of the Annual Report on Form 10-K for the year ended December 31, 2016;

- our Quarterly Report on Form 10-Q for the quarter ended March 31, 2017 filed with the SEC on May 3, 2017;
- our Quarterly Report on Form 10-Q for the quarter ended June 30, 2017 filed with the SEC on August 3, 2017;
- our Quarterly Report on Form 10-Q for the quarter ended September 30, 2017 filed with the SEC on November 2, 2017;
- our Current Reports on Form 8-K filed with the SEC on March 2, 2017, March 31, 2017, April 11, 2017, April 19, 2017, May 1, 2017, May 25, 2017, June 2, 2017, June 27, 2017, July 27, 2017, August 8, 2017, September 6, 2017, September 15, 2017, September 21, 2017, September 26, 2017, November 13, 2017, and December 13, 2017, respectively; and
- the description of our common stock contained in our registration statement on Form 8-A filed on February 25, 2015 pursuant to Section 12 of the Exchange Act, as amended by a Form 8-A/A filed on July 27, 2017 and including any amendment or report filed for the purpose of updating such description.

All documents filed by us pursuant to Sections 13(a), 13(c), 14 and 15(d) of the Exchange Act subsequent to the filing of the Form S-3 Registration Statement, including all such documents we may file with the SEC after the date of the Form S-3 Registration Statement and prior to the effectiveness of the registration statement, and prior to the filing of a post-effective amendment to the Form S-3 Registration Statement which indicates that all securities offered hereby have been sold or which deregisters all such securities then remaining unsold shall be deemed to be incorporated by reference herein and to be a part hereof from the date of filing of such documents. Any statement contained in this prospectus or in a document incorporated or deemed to be incorporated by reference herein shall be deemed to be modified or superseded for purposes of this prospectus to the extent that a statement contained herein or in any subsequently filed document that is or is deemed to be incorporated by reference herein modifies or supersedes such statement.

Notwithstanding the foregoing, no portion of any document that is “furnished” but not “filed” in accordance with SEC rules under Exchange Act shall be deemed to be incorporated by reference into this prospectus. Any statement contained in this prospectus or in a document incorporated by reference into this prospectus will be deemed to be modified or superseded for purposes of this prospectus to the extent that a statement contained in this prospectus or in any other subsequently filed document that is incorporated by reference herein modifies or supersedes the statement. Any statement so modified or superseded will not be deemed, except as so modified or superseded, to constitute a part of this prospectus.

You may request a copy of any of these filings from us at no cost by writing or calling our Chief Financial Officer at the following address or telephone number: Iovance Biotherapeutics, Inc., 999 Skyway Road, Suite 150, San Carlos, California 94070; Telephone: (650) 260-7120.

13,043,479 Shares



Common Stock

PROSPECTUS SUPPLEMENT

Sole Book-Running Manager

Jefferies

January 24, 2018
