Registration No. 333-

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

FORM S-3

REGISTRATION STATEMENT UNDER THE SECURITIES ACT OF 1933

FORTRESS BIOTECH, INC.

(Exact name of registrant as specified in its charter)

Delaware

(State or other jurisdiction of incorporation or organization)

20-5157386 (I.R.S. Employer Identification Number)

2 Gansevoort Street, 9th Floor New York, New York 10014 Telephone: (781) 652-4500 Facsimile: (781) 459-7788

(Address, including zip code, and telephone number, including area code, of registrant's principal executive offices)

Lindsay A. Rosenwald, M.D., Chairman, President and Chief Executive Officer

2 Gansevoort Street, 9th Floor New York, New York 10014 Telephone: (781) 652-4500 Facsimile: (781) 459-7788

(Name, address, including zip code, and telephone number, including area code, of agent for service)

Copies to: W. David Mannheim, Esq. S. Halle Vakani, Esq. Andrew J. Gibbons, Esq. Wyrick Robbins Yates & Ponton LLP 4101 Lake Boone Trail, Suite 300 Raleigh, North Carolina 27607 Telephone: (919) 781-4000 Facsimile: (919) 781-4865

Approximate date of commencement of proposed sale to the public: As soon as practicable after the effective date of this registration statement.

If the only securities being registered on this Form are being offered pursuant to dividend or interest reinvestment plans, please check the following box. \Box

If any of the securities being registered on this Form are to be offered on a delayed or continuous basis pursuant to Rule 415 under the Securities Act of 1933, other than securities offered only in connection with dividend or interest reinvestment plans, check the following box.

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

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

If this Form is a registration statement pursuant to General Instruction I.D. or a post-effective amendment thereto that shall become effective upon filing with the Commission pursuant to Rule 462(e) under the Securities Act, check the following box. \Box

If this Form is a post-effective amendment filed pursuant to General Instruction I.D. filed to register additional securities or additional classes of securities pursuant to Rule 413(b) under the Securities Act, check the following box. \Box

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, or a smaller reporting

company. See the definitions of "large accelerated filer," "accelerated filer" and "smaller reporting company" in Rule 12b-2 of the Exchange Act.

Large accelerated filer \Box

Non-accelerated filer \Box (Do not check if smaller reporting company)

Accelerated filer \boxtimes Smaller reporting company \square

CALCULATION OF REGISTRATION FEE

Title of each class of securities to be registered	Amount to be registered(1)	Proposed maximum offering price per share(2)	Proposed maximum aggregate offering price	Amount of registration fee
Common Stock, \$0.001 par value per share(2)		\$—	\$—	\$
Preferred Stock, \$0.001 par value per share(2)		—	\$—	\$—
Warrants(2)	_	_	\$—	\$—
Units		—	\$—	\$—
Total Offering	\$53,000,000	\$—	\$1	\$0(3)

- (1) There are being registered hereunder such indeterminate number of shares of common stock and preferred stock, such indeterminate number of warrants to purchase common stock or preferred stock, and such indeterminate number of units as shall have an aggregate initial offering price not to exceed \$53,000,000, less the aggregate dollar amount of all securities previously sold hereunder. Any securities registered hereunder may be sold separately or as units with the other securities registered hereunder. The proposed maximum offering price per unit will be determined, from time to time, by the registrant in connection with the issuance by the registrant of the securities registered hereunder. The securities registered hereunder also include such indeterminate number of shares of common stock and preferred stock as may be issued upon conversion of or exchange for preferred stock that provide for conversion or exchange, upon exercise of warrants or pursuant to the antidilution provisions of any of such securities. In addition, pursuant to Rule 416 under the Securities Act of 1933, as amended (the "Securities Act"), the shares being registered hereunder include such indeterminate number of shares of common stock as may be issuable with respect to the shares being registered hereunder as a result of stock splits, stock dividends or similar transactions.
- (2) The proposed maximum offering price per security will be determined from time to time by the registrant in connection with, and at the time of, the issuance of the securities and is not specified as to each class of security pursuant to General Instruction II.D. of Form S-3, as amended.
- (3) Pursuant to Rule 415(a)(6) under the Securities Act, this registration statement includes a total of \$53,000,000 of unsold securities that had previously been registered under the registrant's registration statement on Form S-3 initially filed on July 12, 2013 and amended on August 16, 2013, File Number 333-189935 (the "Prior Registration Statement"). The Prior Registration Statement registered securities for a maximum aggregate offering price of \$200,000,000. After sales by the registrant of securities thereunder, the Prior Registration Statement has a balance of unsold securities with an aggregate offering price of \$183,000,000. In connection with the registration of such unsold securities on the Prior Registration Statement, the registrant paid a registration fee of \$24,961.20. Pursuant to Rule 415(a)(6) under the Securities Act, the offering of \$53,000,000 of the unsold securities registered under the Prior Registration Statement will be deemed terminated as of the date of effectiveness of this registration statement.

THE REGISTRANT HEREBY AMENDS THIS REGISTRATION STATEMENT ON SUCH DATE OR DATES AS MAY BE NECESSARY TO DELAY ITS EFFECTIVE DATE UNTIL THE REGISTRANT SHALL FILE A FURTHER AMENDMENT THAT SPECIFICALLY STATES THAT THIS REGISTRATION STATEMENT SHALL THEREAFTER BECOME EFFECTIVE IN ACCORDANCE WITH SECTION 8(A) OF THE SECURITIES ACT OR UNTIL THIS REGISTRATION STATEMENT SHALL BECOME EFFECTIVE ON SUCH DATE AS THE COMMISSION, ACTING PURSUANT TO SAID SECTION 8(A), MAY DETERMINE.

EXPLANATORY NOTE

This registration statement contains two prospectuses:

- a base prospectus which covers the offering, issuance and sale by us of up to \$53,000,000 of our common stock, preferred stock, warrants and/or units; and
- a sales agreement prospectus covering the offering and sale of our common stock that may be issued and sold under an Amended and Restated At Market Sales Agreement, dated August 17, 2016 between us, MLV & Co. LLC and FBR Capital Markets & Co. for shares of common stock having an aggregate offering price of up to \$53,000,000.

The base prospectus immediately follows this explanatory note. The specific terms of any securities to be offered pursuant to the base prospectus will be specified in a prospectus supplement to the base prospectus. The sales agreement prospectus immediately follows the base prospectus. The \$53,000,000 of common stock that may be offered, issued and sold under the sales agreement prospectus is included in the \$53,000,000 of securities that may be offered, issued and sold by us under the base prospectus.

The information in this prospectus is not complete and may be changed. We may not sell these securities or accept an offer to buy these securities until the registration statement filed with the Securities and Exchange Commission is effective. This prospectus is not an offer to sell these securities, and we are not soliciting an offer to buy these securities in any state where the offer or sale is not permitted.

SUBJECT TO COMPLETION, DATED AUGUST 18, 2016

PROSPECTUS



\$53,000,000 of Common Stock, Preferred Stock, Warrants and/or Units

From time to time, we may offer up to \$53,000,000 of any combination of the securities described in this prospectus, either individually or in units, in one or more offerings in amounts, at prices and on the terms that we will determine at the time of offering. We may also offer common stock upon conversion of preferred stock, or common stock or preferred stock upon the exercise of warrants.

Each time we sell securities, we will provide specific terms of the securities offered in a supplement to this prospectus. The prospectus supplement may also add, update or change information contained in this prospectus. We will specify in any accompanying prospectus supplement the terms of any offering. You should read this prospectus and the applicable prospectus supplement, as well as any documents incorporated by reference in this prospectus and any prospectus supplement, carefully before you invest in any securities.

This prospectus may not be used by us to consummate a sale of securities unless accompanied by the applicable prospectus supplement.

We will sell these securities directly to our stockholders or to other purchasers or through agents on our behalf or through underwriters or dealers as designated from time to time. If any agents or underwriters are involved in the sale of any of these securities, the applicable prospectus supplement will provide the names of the agents or underwriters and any applicable fees, commissions, or discounts.

Our common stock is traded on The NASDAQ Capital Market (the "Exchange") under the symbol "FBIO." The last reported sale price of our common stock on August 17, 2016 was \$2.86 per share. We recommend that you obtain current market quotations for our common stock prior to making an investment decision.

You should carefully read this prospectus, any prospectus supplement relating to any specific offering of securities, and all information incorporated by reference herein and therein.

Investing in these securities involves a high degree of risk. Before buying shares of our common stock, you should carefully consider the risk factors described in "Risk Factors" beginning on page 4 of this prospectus and in the documents incorporated by reference into this prospectus and any free writing prospectus that we have authorized for use in connection with this offering.

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

The date of this prospectus is , 2016.

TABLE OF CONTENTS

	Page
ABOUT THIS PROSPECTUS	1
PROSPECTUS SUMMARY	2
<u>RISK FACTORS</u>	4
FORWARD-LOOKING STATEMENTS	6
USE OF PROCEEDS	7
	8
PLAN OF DISTRIBUTION	8
DESCRIPTION OF CAPITAL STOCK	10
DESCRIPTION OF WARRANTS	12
DESCRIPTION OF UNITS	13
LEGAL MATTERS	13
EXPERTS	13
WHERE YOU CAN FIND ADDITIONAL INFORMATION	14
WILKE TOO CAN TIND ADDITIONAL INFORMATION	14
INCORPORATION OF CERTAIN DOCUMENTS BY REFERENCE	14

ABOUT THIS PROSPECTUS

This prospectus is part of a registration statement that we filed with the SEC utilizing a "shelf" registration process. Under this shelf registration process, we may offer shares of our common stock, shares of our preferred stock and/or warrants to purchase any of such securities, either individually or in units, in one or more offerings, up to a total dollar amount of \$53,000,000. This prospectus provides you with a general description of the securities we may offer. Each time we offer a type or series of securities under this prospectus, we will provide a prospectus supplement that will contain specific information about the terms of that offering.

This prospectus does not contain all of the information included in the registration statement. For a more complete understanding of the offering of the securities, you should refer to the registration statement, including its exhibits. Prospectus supplements may also add, update or change information contained or incorporated by reference in this prospectus. However, no prospectus supplement will fundamentally change the terms that are set forth in this prospectus or offer a security that is not registered and described in this prospectus at the time of its effectiveness. This prospectus, together with the applicable prospectus supplements and the documents incorporated by reference into this prospectus, include all material information relating to this offering. You should carefully read this prospectus, the applicable prospectus supplement, the information and documents incorporated herein by reference and the additional information under the heading "Where You Can Find Additional Information About Us" before making an investment decision.

You should rely only on the information we have provided or incorporated by reference in this prospectus or any prospectus supplement. We have not authorized anyone to provide you with information different from that contained or incorporated by reference in this prospectus. No dealer, salesperson or other person is authorized to give any information or to represent anything not contained or incorporated by reference in this prospectus. You must not rely on any unauthorized information or representation. This prospectus is an offer to sell only the securities offered hereby, but only under circumstances and in jurisdictions where it is lawful to do so. You should assume that the information in this prospectus or any prospectus supplement is accurate only as of the date on the front of the document and that any information we have incorporated herein by reference is accurate only as of the date of the document incorporated by reference, regardless of the time of delivery of this prospectus or any sale of a security.

To the extent there are inconsistencies between any prospectus supplement, this prospectus and any documents incorporated by reference, the document with the most recent date will control.

This prospectus may not be used to consummate sales of our securities, unless it is accompanied by a prospectus supplement.

Unless otherwise indicated in this prospectus or the context otherwise requires, all references to "we," "us," "our," "the Company," and "Fortress" refer to Fortress Biotech, Inc. and its subsidiaries.

PROSPECTUS SUMMARY

This summary highlights certain information about us and selected information contained elsewhere in or incorporated by reference into this prospectus. Because it is a summary, it might not contain all of the information that is important to you. For a more complete understanding of our Company, we encourage you to read and consider carefully the more detailed information in this prospectus, including the information incorporated by reference into this prospectus, and the information referred to under the heading "Risk Factors" in this prospectus beginning on page 4 and in the documents incorporated by reference into this prospectus.

Our Company

Since inception in June 2006, we have been a biopharmaceutical company involved in the development of novel immunotherapy agents for the treatment of autoimmune diseases and cancer. In April 2015, we changed our name to Fortress Biotech, Inc. and began implementing our growth strategy to acquire, develop and commercialize novel pharmaceutical and biotechnology products. We plan to continue to develop and commercialize products both within Fortress and our subsidiaries, also referred to as the "Fortress Companies." In addition to our internal development programs, we plan to leverage our biopharmaceutical business expertise and drug development capabilities to help the Fortress Companies innovate, develop and commercialize products. Additionally, we will provide funding and management services to each of the Fortress Companies and, from time to time, we and the Fortress Companies will seek licensing, acquisitions, partnerships, joint ventures and/or public and private financings to accelerate and provide additional funding to support our research and development programs.

Pursuant to our growth strategy, in April 2016, we and our wholly owned subsidiary FBIO Acquisition, Inc. ("Acquisition Sub"), entered into an Agreement and Plan of Merger ("Merger Agreement") to acquire National Holdings Corporation ("NHLD"). As previously reported in our filings with the SEC, pursuant to the Merger Agreement (as subsequently amended in August 2016), we recently commenced a tender offer (the "Offer") for all of the issued and outstanding shares of NHLD's common stock, par value \$0.02 per share, at a purchase price of \$3.25 per share in cash, net to the seller in cash but subject to any required withholding of taxes. Following the completion of the Offer, if at least 80% of NHLD's stock is tendered (in addition to other conditions), Acquisition Sub will merge with and into NHLD, with NHLD surviving as our subsidiary ("Merger"). Provided that the Merger Agreement is not terminated early, we will file financial statements relating to NHLD and the Merger with the SEC prior to selling securities under this prospectus and any prospectus supplement hereto.

Corporate Information

We were incorporated in June 2006 under the laws of Delaware. Our principal executive offices are located at 2 Gansevoort Street, 9th Floor, New York, New York 10014, and our telephone number is (781) 652-4500. Our website address is www.fortressbiotech.com. Information found on, or accessible through, our website is not a part of, and is not incorporated into, this prospectus, and you should not consider it part of this prospectus or part of any prospectus supplement.

2

The Offering

We may offer shares of our common stock, shares of our preferred stock and/or warrants to purchase any of such securities, either individually or in units, with a total value of up to \$53,000,000 from time to time under this prospectus at prices and on terms to be determined by market conditions at the time of any offering. This prospectus provides you with a general description of the securities we may offer. Each time we offer a type or series of securities under this prospectus, we will provide a prospectus supplement that will describe the specific amounts, prices and other important terms of the securities.

The prospectus supplement also may add, update or change information contained in this prospectus or in documents we have incorporated by reference into this prospectus. However, no prospectus supplement will fundamentally change the terms that are set forth in this prospectus or offer a security that is not registered and described in this prospectus at the time of its effectiveness.

This prospectus may not be used to consummate a sale of any securities unless it is accompanied by a prospectus supplement.

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

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

Common Stock

We may issue shares of our common stock from time to time. The holders of common stock are entitled to one vote per share on all matters to be voted upon by stockholders. Subject to preferences that may be applicable to any outstanding preferred stock, the holders of common stock are entitled to receive ratably any dividends that may be declared from time to time by our board of directors out of funds legally available for that purpose. In the event of our liquidation, dissolution or winding up, the holders of common stock are entitled to share ratably in all assets remaining after payment of liabilities, subject to prior distribution rights of any preferred stock then outstanding.

Preferred Stock

We may issue shares of our preferred stock from time to time, in one or more class and/or series. Our board of directors will determine the rights, preferences, privileges and restrictions of the preferred stock, including dividend rights, conversion rights, voting rights, terms of redemption, liquidation preferences, sinking fund terms and the number of shares constituting any series or the designation of such class and/or series, without any further vote or action by stockholders. Convertible preferred stock will be convertible into our common stock or exchangeable for our other securities. Conversion may be mandatory or at your option or both and would be at prescribed conversion rates.

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

<u>Warrants</u>

We may issue warrants for the purchase of common stock or preferred stock in one or more series. We may issue warrants independently or together with common stock or preferred stock, and the warrants may be attached to or separate from these securities. We will evidence each series of warrants by warrant certificates that we will issue under a separate agreement. We may enter into warrant agreements with a bank or trust company that we select to be our warrant agent. We will indicate the name and address of the warrant agent in the applicable prospectus supplement relating to a particular series of warrants.

In this prospectus, we have summarized certain general features of the warrants. We urge you, however, to read the applicable prospectus supplement related to the particular series of warrants being offered, as well as the warrant agreements and warrant certificates that contain the terms of the warrants. We will file as exhibits to the registration statement of which this prospectus is a part, or will incorporate by reference from reports that we file with the SEC, the form of warrant agreement or warrant certificate containing the terms of the warrants we are offering before the issuance of the warrants.

<u>Units</u>

We may issue units consisting of common stock, preferred stock and/or warrants for the purchase of common stock or preferred stock in one or more class and/or series. In this prospectus, we have summarized certain general features of the units. We urge you,

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

RISK FACTORS

Investing in our securities involves a high degree of risk. You should consider carefully the risks and uncertainties described below together with the other information included in this prospectus and incorporated by reference herein, before deciding to purchase our securities. In addition, you should carefully consider, among other things, the section entitled "Risk Factors" beginning on page 12 of our Annual Report on Form 10-K for the fiscal year ended December 31, 2015, page 43 of our Quarterly Report on Form 10-Q for the quarter ended June 30, 2016, as well as any amendment or update to our risk factors in subsequent filings with the SEC, and other information in our consolidated financial statements, all of which are incorporated by reference into this prospectus. The risks described below and incorporated herein by reference are those which we believe are the material risks that we face. The occurrence of any of the following risks may materially and adversely affect our business, financial condition, results of operations, cash flows, reputation and future prospects. In this event, the market price of our common stock could decline, and you could lose part or all of your investment.

Risks Associated with our Capital Stock

Some of our executives, directors and principal stockholders can control our direction and policies, and their interests may be adverse to the interests of our other stockholders.

At June 30, 2016, Lindsay A. Rosenwald, M.D., our Chairman, President and Chief Executive Officer, beneficially owned 12.9% of our issued and outstanding capital stock. At June 30, 2016, Michael S. Weiss, our Executive Vice Chairman, Strategic Development, beneficially owned 15.3% of our issued and outstanding capital stock. By virtue of their holdings and membership on our Board of Directors, Dr. Rosenwald and Mr. Weiss may individually influence our management and our affairs and may make it difficult for us to consummate corporate transactions such as mergers, consolidations or the sale of all or substantially all of our assets that may be favorable from our standpoint or that of our other stockholders.

The market price of our Common Stock may be volatile and may fluctuate in a way that is disproportionate to our operating performance.

Our stock price may experience substantial volatility as a result of a number of factors, including:

- announcements we make regarding our or our subsidiaries' current product candidates, acquisition of potential new product candidates and companies and/or in-licensing through multiple subsidiaries;
- · sales or potential sales of substantial amounts of our common stock;
- our or our subsidiaries' delay or failure in initiating or completing pre-clinical or clinical trials or unsatisfactory results of any of these trials;
- · announcements about us, our subsidiaries or about our competitors, including clinical trial results, regulatory approvals or new product introductions;
- · developments concerning our or our subsidiaries' licensors and/or product manufacturers;
- litigation and other developments relating to our or our subsidiaries' patents or other proprietary rights or those of our competitors;
- · conditions in the pharmaceutical or biotechnology industries;
- · governmental regulation and legislation;
- · variations in our anticipated or actual operating results; and
- change in securities analysts' estimates of our performance, or our failure to meet analysts' expectations.

Many of these factors are beyond our control. The stock markets in general, and the market for pharmaceutical and biotechnological companies in particular, have historically experienced extreme price and volume fluctuations. These fluctuations often have been unrelated or disproportionate to the operating performance of these companies. These broad market and industry factors could reduce the market price of our common stock, regardless of our actual operating performance.

Sales of a substantial number of shares of our common stock, or the perception that such sales may occur, may adversely impact the price of our common stock.

Almost all of the 48.7 million outstanding shares of our common stock as of August 17, 2016 are available for sale in the public market, either pursuant to Rule 144 under the Securities Act of 1933, as amended, or the Securities Act, or an effective registration statement. Pursuant to our shelf registration statement on Form S-3 of which this prospectus is a part, we may sell up to \$53 million of our equity securities over the next three years. Sales of a substantial number of shares of our common stock, or the perception that such sales may occur, may adversely impact the price of our common stock.

We have never paid and do not intend to pay cash dividends. As a result, capital appreciation, if any, will be your sole source of gain.

We have never paid cash dividends on any of our capital stock and we currently intend to retain future earnings, if any, to fund the development and growth of our business. In addition, the terms of existing and future debt agreements may preclude us from paying dividends. As a result, capital appreciation, if any, of our common stock will be your sole source of gain for the foreseeable future.

Provisions in our certificate of incorporation, our bylaws and Delaware law might discourage, delay or prevent a change in control of our Company or changes in our management and, therefore, depress the trading price of our common stock.

Provisions of our certificate of incorporation, our bylaws and Delaware law may have the effect of deterring unsolicited takeovers or delaying or preventing a change in control of our Company or changes in our management, including transactions in which our stockholders might otherwise receive a premium for their shares over then-current market prices. In addition, these provisions may limit the ability of stockholders to approve transactions that they may deem to be in their best interests. These provisions include:

- the inability of stockholders to call special meetings; and
- the ability of our Board of Directors to designate the terms of and issue new series of preferred stock without stockholder approval, which could include the right to approve an acquisition or other change in our control or could be used to institute a rights plan, also known as a poison pill, that would work to dilute the stock ownership of a potential hostile acquirer, likely preventing acquisitions that have not been approved by our Board of Directors.

In addition, the Delaware General Corporation Law, or DGCL, prohibits a publicly held Delaware corporation from engaging in a business combination with an interested stockholder, generally a person which together with its affiliates owns, or within the last three years, has owned 15% of our voting stock, for a period of three years after the date of the transaction in which the person became an interested stockholder, unless the business combination is approved in a prescribed manner.

The existence of the foregoing provisions and anti-takeover measures could limit the price that investors might be willing to pay in the future for shares of our common stock. They could also deter potential acquirers of our Company, thereby reducing the likelihood that you could receive a premium for your shares of our common stock in an acquisition.

5

FORWARD-LOOKING STATEMENTS

This prospectus, including the documents that we incorporate by reference, may contain forward-looking statements within the meaning of Section 27A of the Securities Act, and Section 21E of the Securities Exchange Act of 1934, as amended, or the Exchange Act. Statements in this prospectus, and documents we incorporate by reference, that are not descriptions of historical facts are forward-looking statements that are based on management's current expectations and are subject to risks and uncertainties that could negatively affect our business, operating results, financial condition and stock price. We have attempted to identify forward-looking statements by terminology including "anticipates," "believes," "can," "continue," "could," "estimates," "expects," "intends," "may," "might," "plans," "potential," "predicts," "should," or "will" or the negative of these terms or other comparable terminology. Factors that could cause actual results to differ materially from those currently anticipated include those set forth under "Risk Factors" including, in particular, risks relating to:

- our growth strategy;
- our ability to continue to commercialize products;
- our ability to identify, acquire, close and integrate product candidates and companies successfully and on a timely basis;
- · financing and strategic agreements, acquisitions and relationships;
- our need for substantial additional funds and uncertainties relating to financings;
- our ability to attract, integrate and retain key personnel;
- the early stage of products under development;
- the results of research and development activities;
- · uncertainties relating to preclinical and clinical testing;
- · our ability to secure and maintain third-party manufacturing, marketing and distribution of our products;
- · dependence on third-party suppliers;
- · government regulation;
- · patent and intellectual property matters; and
- · competition.

You should read this prospectus and the documents that we reference herein completely and with the understanding that our actual future results may be materially different from what we currently expect. You should assume that the information appearing in this prospectus and any document incorporated by reference is accurate as of its date only. Because the risk factors referred to above could cause actual results or outcomes to differ materially from those expressed in any forward-looking statements made by us or on our behalf, you should not place undue reliance on any forward-looking statements. Further, any forward-looking statement speaks only as of the date on which it is made, and we undertake no obligation to update any forward-looking statement to reflect events or circumstances after the date on which the statement is made or to reflect the occurrence of unanticipated events. New factors emerge from time to time, and it is not possible for us to predict which factors will arise. In addition, we cannot assess the impact of each factor on our business or the extent to which any factor, or combination of factors, may cause actual results to differ materially from those contained in any forward-looking statements. We qualify all of the information presented in this prospectus, any accompanying prospectus supplement and any document incorporated herein by reference, and particularly our forward-looking statements, by these cautionary statements.

USE OF PROCEEDS

Except as otherwise provided in the applicable prospectus supplement, we intend to use the net proceeds from the sale of the securities covered by this prospectus for general corporate purposes and working capital. The precise amount, use and timing of the application of such proceeds will depend upon our funding requirements and the availability and cost of other capital. Additional information on the use of net proceeds from an offering of securities covered by this prospectus may be set forth in the prospectus supplement relating to the specific offering.

PLAN OF DISTRIBUTION

We may sell the securities being offered pursuant to this prospectus to or through underwriters, through dealers, through agents, or directly to one or more purchasers or through a combination of these methods. The applicable prospectus supplement will describe the terms of the offering of the securities, including:

- the name or names of any underwriters, if any, and if required, any dealers or agents;
- the purchase price of the securities and the proceeds we will receive from the sale;
- · any underwriting discounts and other items constituting underwriters' compensation;
- · any discounts or concessions allowed or reallowed or paid to dealers; and
- any securities exchange or market on which the securities may be listed or traded.

We may distribute the securities from time to time in one or more transactions at:

- a fixed price or prices, which may be changed;
- market prices prevailing at the time of sale, directly by us or through a designated agent;
- · prices related to such prevailing market prices; or
- · negotiated prices.

Only underwriters named in the prospectus supplement are underwriters of the securities offered by the prospectus supplement.

If underwriters are used in an offering, we will execute an underwriting agreement with such underwriters and will specify the name of each underwriter and the terms of the transaction (including any underwriting discounts and other terms constituting compensation of the underwriters and any dealers) in a prospectus supplement. The securities may be offered to the public either through underwriting syndicates represented by managing underwriters or directly by one or more investment banking firms or others, as designated. If an underwriting syndicate is used, the managing underwriter(s) will be specified on the cover of the prospectus supplement. If underwriters are used in the sale, the offered securities will be acquired by the underwriters for their own accounts and may be resold from time to time in one or more transactions, including negotiated transactions, at a fixed public offering price or at varying prices determined at the time of sale. Any public offering price and any discounts or concessions allowed or reallowed or paid to dealers may be changed from time to time. Unless otherwise set forth in the prospectus supplement, the obligations of the underwriters to purchase the offered securities will be subject to conditions precedent, and the underwriters will be obligated to purchase all of the offered securities, if any are purchased.

We may grant to the underwriters options to purchase additional securities to cover over-allotments, if any, at the public offering price, with additional underwriting commissions or discounts, as may be set forth in a related prospectus supplement. The terms of any over-allotment option will be set forth in the prospectus supplement for those securities.

If we use a dealer in the sale of the securities being offered pursuant to this prospectus or any prospectus supplement, we will sell the securities 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. The names of the dealers and the terms of the transaction will be specified in a prospectus supplement.

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

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

In connection with the sale of the securities, underwriters, dealers or agents may receive compensation from us or from purchasers of the securities for whom they act as agents, in the form of discounts, concessions or commissions. Underwriters 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 or commissions from the purchasers for whom they may act as agents. Underwriters, dealers and agents that participate in the distribution of the securities, and any institutional investors or others that purchase securities directly for the purpose of resale or distribution, may be deemed to be underwriters, and any discounts or commissions received by them from us and any profit on the resale of the common stock by them may be deemed to be underwriting discounts and commissions under the Securities Act.

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

To facilitate the public offering of a series of securities, persons participating in the offering may engage in transactions that stabilize, maintain, or otherwise affect the market price of the securities. This may include over-allotments or short sales of the securities, which involves the sale by persons participating in the offering of more securities than have been sold to them by us. In exercising the over-allotment option granted to those persons. In addition, those 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 underwriters or dealers participating in any such 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. Such transactions, if commenced, may be discontinued at any time. We make no representation or prediction as to the direction or magnitude of any effect that the transactions described above, if implemented, may have on the price of our securities.

Unless otherwise specified in the applicable prospectus supplement, any common stock sold pursuant to a prospectus supplement will be eligible for listing on the Exchange, subject to official notice of issuance. Any underwriters to whom securities are sold by us for public offering and sale may make a market in the securities, but such underwriters will not be obligated to do so and may discontinue any market making at any time without notice.

In order to comply with the securities laws of some states, if applicable, the securities offered pursuant to this prospectus will be sold in those states only through registered or licensed brokers or dealers. In addition, in some states securities may not be sold unless they have been registered or qualified for sale in the applicable state or an exemption from the registration or qualification requirement is available and complied with.

9

DESCRIPTION OF CAPITAL STOCK

General

The following description of common stock and preferred stock summarizes the material terms and provisions of the common stock and preferred stock that we may offer under this prospectus, but is not complete. For the complete terms of our common stock and preferred stock, please refer to our certificate of incorporation, any certificates of designation for our preferred stock, and bylaws, as may be amended from time to time. While the terms we have summarized below will apply generally to any future common stock or preferred stock that we may offer, we will describe the specific terms of any series of preferred stock in more detail in the applicable prospectus supplement. If we so indicate in a prospectus supplement, the terms of any preferred stock we offer under that prospectus supplement may differ from the terms we describe below.

As of August 17, 2016, our authorized capital stock consists of 115 million shares, consisting of 100 million shares of common stock par value \$0.001 per share, and 15 million shares of preferred stock, par value \$0.001 per share. The authorized and unissued shares of common stock and the authorized and undesignated shares of preferred stock are available for issuance without further action by our stockholders, unless such action is required by applicable law or the rules of any stock exchange on which our securities may be listed. Unless approval of our stockholders is so required, our board of directors will not seek stockholder approval for the issuance and sale of our common stock or preferred stock.

Common Stock

Our certificate of incorporation authorizes the issuance of up to 100 million shares of common stock, par value \$0.001 per share. As of August 17, 2016, there were 48.7 million shares of common stock outstanding, as well as 4.4 million unissued shares of common stock subject to outstanding options, unvested restricted stock units, warrants and deferred stock grants. Each holder of issued common stock is entitled to one vote for each share of common stock held on all matters submitted to a vote of the stockholders, including the election of directors. Our certificate of incorporation and bylaws do not provide for cumulative voting rights. Subject to preferences that may be applicable to any then outstanding preferred stock, the holders of our outstanding shares of common stock are entitled to receive dividends, if any, as may be declared from time to time by our board of directors out of legally available funds. In the event of our liquidation, dissolution or winding up, holders of common stock will be entitled to share ratably in the net assets legally available for distribution to stockholders after the payment of all of our debts and other liabilities, subject to the satisfaction of any liquidation preference granted to the holders of any outstanding shares of preferred stock. Holders of our common stock have no preemptive, conversion or subscription rights, and there are no redemption or sinking fund provisions applicable to the common stock. The rights, preferences and privileges of the holders of common stock are subject to, and may be adversely affected by, the rights of the holders of shares of any series of our preferred stock that we may designate and issue in the future. All of our outstanding shares of common stock are fully paid and nonassessable.

The transfer agent and registrar for our common stock is VStock Transfer, LLC. The transfer agent's address is 18 Lafayette Place, Woodmere, New York 11598. Our common stock is listed for quotation on the Exchange under the symbol "FBIO." On August 17, 2016, the last reported sale price of our common stock was \$2.86 per share.

Preferred Stock

We are authorized to issue 15 million shares of preferred stock, par value \$0.001 per share. In November 2011, all of our then outstanding shares of preferred stock were converted, on a one-for-one basis, into 11.5 million shares of our common stock. As of August 17, 2016, there were no shares of preferred stock outstanding.

Our board of directors may divide the authorized shares of preferred stock into series and fix and determine the relative rights and preferences of the preferred stock, such as the designation of series and the number of shares constituting such series, dividend rights, redemption and sinking fund provisions, liquidation and dissolution preferences, conversion or exchange rights and voting rights, if any. Issuance of preferred stock by our board of directors will result in such shares having dividend and/or liquidation preferences senior to the rights of the holders of our common stock and could dilute the voting rights of the holders of our common stock.

Prior to the issuance of shares of each series of preferred stock, the board of directors is required by the DGCL and our certificate of incorporation to adopt resolutions and file a certificate of designation with the Secretary of State of the State of Delaware. The certificate of designation fixes for each class or series the designations, powers, preferences, rights, qualifications, limitations and restrictions, including, but not limited to, some or all of the following:

- the number of shares constituting that series and the distinctive designation of that series, which number may be increased or decreased (but not below the number of shares then outstanding) from time to time by action of the board of directors;
- the dividend rate and the manner and frequency of payment of dividends on the shares of that series, whether dividends will be cumulative, and, if so, from which date;

- whether that series will have voting rights, in addition to any voting rights provided by law, and, if so, the terms of such voting rights;
- whether that series will have conversion privileges, and, if so, the terms and conditions of such conversion, including provision for adjustment of the conversion rate in such events as the board of directors may determine;
- whether or not the shares of that series will be redeemable, and, if so, the terms and conditions of such redemption;
- whether that series will have a sinking fund for the redemption or purchase of shares of that series, and, if so, the terms and amount of such sinking fund;
- whether or not the shares of the series will have priority over or be on a parity with or be junior to the shares of any other series or class in any respect;
- the rights of the shares of that series in the event of voluntary or involuntary liquidation, dissolution or winding up of the corporation, and the relative rights or priority, if any, of payment of shares of that series; and
- any other relative rights, preferences and limitations of that series.

Once designated by our board of directors, each series of preferred stock will have specific financial and other terms that will be described in a prospectus supplement. The description of the preferred stock that is set forth in any prospectus supplement is not complete without reference to the documents that govern the preferred stock. These include our certificate of incorporation and any certificates of designation that our board of directors may adopt.

All shares of preferred stock offered hereby will, when issued, be fully paid and nonassessable, including shares of preferred stock issued upon the exercise of preferred stock warrants or subscription rights, if any.

Although our board of directors has no intention at the present time of doing so, it could authorize the issuance of a series of preferred stock that could, depending on the terms of such series, impede the completion of a merger, tender offer or other takeover attempt.

11

DESCRIPTION OF WARRANTS

As of August 17, 2016, we had outstanding warrants to purchase a total of 515,068 shares of our common stock.

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

General

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

We will evidence each series of warrants by warrant certificates that we may issue under a separate agreement. We may enter into a warrant agreement with a warrant agent. Each warrant agent may be a bank that we select which has its principal office in the United States. We may also choose to act as our own warrant agent. We will indicate the name and address of any such warrant agent in the applicable prospectus supplement relating to a particular series of warrants.

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

- the offering price and aggregate number of warrants offered;
- if applicable, the designation and terms of the securities with which the warrants are issued and the number of warrants issued with each such security or each principal amount of such security;
- · if applicable, the date on and after which the warrants and the related securities will be separately transferable;
- in the case of warrants to purchase common stock or preferred stock, the number or amount of shares of common stock or preferred stock, as the case may be, purchasable upon the exercise of one warrant and the price at which and currency in which these shares may be purchased upon such exercise;
- the manner of exercise of the warrants, including any cashless exercise rights;
- the warrant agreement under which the warrants will be issued;
- the effect of any merger, consolidation, sale or other disposition of our business on the warrant agreement and the warrants;
- · anti-dilution provisions of the warrants, if any;
- the terms of any rights to redeem or call the warrants;
- any provisions for changes to or adjustments in the exercise price or number of securities issuable upon exercise of the warrants;
- the dates on which the right to exercise the warrants will commence and expire or, if the warrants are not continuously exercisable during that period, the specific date or dates on which the warrants will be exercisable;
- the manner in which the warrant agreement and warrants may be modified;
- the identities of the warrant agent and any calculation or other agent for the warrants;
- · federal income tax consequences of holding or exercising the warrants;
- the terms of the securities issuable upon exercise of the warrants;
- any securities exchange or quotation system on which the warrants or any securities deliverable upon exercise of the warrants may be listed or quoted; and
- any other specific terms, preferences, rights or limitations of or restrictions on the warrants.

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

Each warrant will entitle the holder to purchase the securities that we specify in the applicable prospectus supplement at the exercise price that we describe in the applicable prospectus supplement. Unless we otherwise specify in the applicable prospectus supplement, holders of the warrants may exercise the warrants at any time up to 5:00 P.M. eastern time, the close of business, on the expiration date that we set forth in the applicable prospectus supplement. After the close of business on the expiration date, unexercised warrants will become void.

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

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

Enforceability of Rights By Holders of Warrants

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

Warrant Agreement Will Not Be Qualified Under Trust Indenture Act

No warrant agreement will be qualified as an indenture, and no warrant agent will be required to qualify as a trustee, under the Trust Indenture Act. Therefore, holders of warrants issued under a warrant agreement will not have the protection of the Trust Indenture Act with respect to their warrants.

Governing Law

Each warrant agreement and any warrants issued under the warrant agreements will be governed by New York law.

DESCRIPTION OF UNITS

We may issue units comprised of one or more of the other securities described in this prospectus or any prospectus supplement in any combination. Each unit will be issued so that the holder of the unit is also the holder, with the rights and obligations of a holder, of each security included in the unit. The unit agreement under which a unit is issued may provide that the securities included in the unit may not be held or transferred separately, at any time or at any times before a specified date or upon the occurrence of a specified event or occurrence.

The applicable prospectus supplement will describe:

- the designation and the terms of the units and of the securities comprising the units, including whether and under what circumstances those securities may be held or transferred separately;
- any unit agreement under which the units will be issued;
- any provisions for the issuance, payment, settlement, transfer or exchange of the units or of the securities comprising the units; and
- whether the units will be issued in fully registered or global form.

LEGAL MATTERS

The validity of the securities offered will be passed upon by Wyrick Robbins Yates & Ponton LLP, Raleigh, North Carolina.

EXPERTS

The consolidated balance sheets of Fortress Biotech, Inc. as of December 31, 2015 and 2014 and the related consolidated statements of operations, stockholders' equity, and cash flows for each of the years then ended have been audited by EisnerAmper LLP, independent registered public accounting firm, as stated in their reports, which are incorporated herein by reference, which reports (1) express an unqualified opinion on the financial statements have been incorporated herein by reference on the reports of such firm given upon their authority as experts in accounting and auditing.

The consolidated financial statements for the year ended December 31, 2013 incorporated in this prospectus by reference to the Annual Report on Form 10-K for the year ended December 31, 2015 have been so incorporated in reliance on the report of PricewaterhouseCoopers LLP, an independent registered public accounting firm, given on the authority of said firm as experts in auditing and accounting.

WHERE YOU CAN FIND ADDITIONAL INFORMATION

We are subject to the reporting requirements of the Exchange Act, and file annual, quarterly and current reports, proxy statements and other information with the SEC. You may read and copy these reports, proxy statements and other information at the SEC's public reference facilities at 100 F Street, N.E., Room 1580, Washington, D.C. 20549. You can request copies of these documents by writing to the SEC and paying a fee for the copying cost. Please call the SEC at 1-800-SEC-0330 for more information about the operation of the public reference facilities. SEC filings are also available at the SEC's web site at http://www.sec.gov.

This prospectus is only part of a registration statement on Form S-3 that we have filed with the SEC under the Securities Act, and therefore omits certain information contained in the registration statement. We have also filed exhibits and schedules with the registration statement that are excluded from this prospectus, and you should refer to the applicable exhibit or schedule for a complete description of any statement referring to any contract or other document. You may inspect a copy of the registration statement, including the exhibits and schedules, without charge, at the public reference facilities or obtain a copy from the SEC upon payment of the fees prescribed by the SEC.

INCORPORATION OF CERTAIN DOCUMENTS BY REFERENCE

The SEC allows us to "incorporate by reference" information we file with it into our registration statement of which this prospectus is a part, which means that we can disclose important information to you by referring you to other documents. The information incorporated by reference is considered to be part of this prospectus, and information that we file later with the SEC and incorporate by reference will automatically update and supersede this information. We incorporate by reference into this prospectus the documents listed below and all future filings made by us with the SEC under Section 13(a), 13(c), 14 or 15(d) of the Exchange Act, except for information "furnished" under Items 2.02, 7.01 or 9.01 on Form 8-K or other information "furnished" to the SEC which is not deemed filed and not incorporated in this prospectus, until the termination of the offering of securities described in the applicable prospectus supplement.

We hereby incorporate by reference the following documents:

- (a) our Annual Report on Form 10-K for the year ended December 31, 2015, filed with the SEC on March 15, 2016 including the information specifically incorporated by reference into the Annual Report on Form 10-K from our definitive proxy statement for the 2016 Annual Meeting of Stockholders;
- (b) our Quarterly Report on Form 10-Q for the quarter ended March 31, 2016, filed with the SEC on May 10, 2016;
- (c) our Quarterly Report on Form 10-Q for the quarter ended June 30, 2016, filed with the SEC on August 9, 2016;
- (d) our Current Reports on Form 8-K filed on January 7, 2016, April 18, 2016, April 21, 2016, April 28, 2016, May 4, 2016, May 6, 2016, May 26, 2016, June 1, 2016, June 21, 2016, August 12, 2016 and August 17, 2016; and
- (e) the description of our common stock included in our registration statement on Form 8-A, filed with the SEC on December 7, 2011.

Any statement contained in this prospectus or in a document incorporated or deemed to be 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 any other subsequently filed document that is deemed to be incorporated by reference into this prospectus modifies or supersedes such statement. Any statement so modified or superseded will not be deemed, except as so modified or superseded, to constitute a part of this registration statement.

We will furnish without charge to you, on written or oral request, a copy of any or all of the documents incorporated by reference, including exhibits to these documents. You should direct any requests for documents in writing to: Fortress Biotech, Inc., 2 Gansevoort Street, 9th Floor, New York, New York 10014, Attention: Corporate Secretary, tel: 781-652-4500. These documents are also available on the Investors section of our website, which is located at www.fortressbiotech.com, or as described under "Where You Can Find Additional Information" above. The reference to our website address does not constitute incorporation by reference of the information contained on our website.

You should rely only on information contained in, or incorporated by reference into, this prospectus and any prospectus supplement. We have not authorized anyone to provide you with information different from that contained in this prospectus or incorporated by reference in this prospectus. We are not making offers to sell the securities in any jurisdiction in which such an offer or solicitation is not authorized or in which the person making such offer or solicitation is not qualified to do so or to anyone to whom it is unlawful to make such offer or solicitation.



\$53,000,000 of Common Stock, Preferred Stock, Warrants and/or Units

PROSPECTUS

The date of this prospectus is , 2016

The information in this prospectus is not complete and may be changed. We may not sell these securities or accept an offer to buy these securities until the registration statement filed with the Securities and Exchange Commission is effective. This prospectus is not an offer to sell these securities, and we are not soliciting an offer to buy these securities in any state where the offer or sale is not permitted.

SUBJECT TO COMPLETION, DATED AUGUST 18, 2016

PROSPECTUS



Fortress Biotech, Inc. Common Stock

In accordance with the terms of the Amended and Restated At Market Issuance Sales Agreement entered into with MLV & Co. LLC, or MLV, and FBR Capital Markets & Co., or FBR, and collectively with MLV, the Agents, dated August 17, 2016, which we refer to as the sales agreement, we may offer and sell under this prospectus shares of our common stock, \$0.001 par value per share, having an aggregate offering price of up to \$53,000,000 from time to time through MLV and FBR, acting as the Agents.

Our common stock is traded on The NASDAQ Capital Market (the "Exchange") under the symbol "FBIO." The last reported sale price of our common stock on August 17, 2016 was \$2.86 per share.

Sales of our common stock, if any, under this prospectus will be made by any method permitted that is deemed an "at the market offering" as defined in Rule 415 under the Securities Act of 1933, as amended (the "Securities Act"), including sales made directly on the Exchange, any other existing trading market for our common stock, sales made to or through a market maker, in negotiated transactions at market prices, and/or any other method permitted by law. The Agents are not required to sell any specific amount of shares of our common stock, but will act as our sales agents using commercially reasonable efforts consistent with their normal trading and sales practices. There is no arrangement for funds to be received in any escrow, trust or similar arrangement.

The Agents will be entitled to compensation at a commission rate of up to 3.0% of the gross sales price per share of our common stock sold. In connection with the sale of our common stock on our behalf, each of the Agents will be deemed to be an "underwriter" within the meaning of the Securities Act and the compensation of the Agents will be deemed to be underwriting commissions or discounts. We have also agreed to provide indemnification and contribution to the Agents with respect to certain liabilities, including liabilities under the Securities Act.

Investing in our common stock involves a high degree of risk. Before buying shares of our common stock, you should carefully consider the risk factors described in "Risk Factors" beginning on page SA-4 of this prospectus and in the documents incorporated by reference therein and any free writing prospectus that we have authorized for use in connection with this offering.

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

FBR

MLV & Co.

The date of this prospectus is

, 2016.

TABLE OF CONTENTS

	Page
ABOUT THIS PROSPECTUS	SA-1
PROSPECTUS SUMMARY	SA-2
<u>RISK FACTORS</u>	SA-4
FORWARD-LOOKING STATEMENTS	SA-6
USE OF PROCEEDS	SA-7
DILUTION	SA-8
DIVIDEND POLICY	SA-9
PLAN OF DISTRIBUTION	SA-10
LEGAL MATTERS	SA-10
EXPERTS	SA-10
WHERE YOU CAN FIND ADDITIONAL INFORMATION	SA-11
INCORPORATION OF CERTAIN DOCUMENTS BY REFERENCE	SA-11

ABOUT THIS PROSPECTUS

This prospectus relates to the offering of our common stock. Before buying any of the common stock that we are offering, we urge you to carefully read this prospectus, together with the information incorporated by reference as described under the heading "Where You Can Find Additional Information" and "Incorporation of Certain Documents by Reference." These documents contain important information that you should consider when making your investment decision.

This prospectus describes the specific terms of the common stock we are offering and also adds to and updates information contained in the documents incorporated by reference into this prospectus. To the extent there is a conflict between the information contained in this prospectus, on the one hand, and the information contained in any document incorporated by reference in this prospectus, on the other hand, you should rely on the information in this prospectus. If any statement in one of these documents is inconsistent with a statement in another document having a later date—for example, a document incorporated by reference into this prospectus—the statement in the document having the later date modifies or supersedes the earlier statement.

You should rely only on the information contained in or incorporated by reference in this prospectus and any free writing prospectus that we may authorize for use in connection with this offering. We have not, and the Agents have not, authorized anyone to provide you with different information. If anyone provides you with different or inconsistent information, you should not rely on it. We are not, and the Agents are not, making an offer to sell these securities in any jurisdiction where the offer or sale is not permitted or in which the person making that offer or solicitation is not qualified to do so or to anyone to whom it is unlawful to make an offer or solicitation. You should assume that the information appearing in this prospectus, the documents incorporated by reference in this prospectus and any free writing prospectus that we have authorized for use in connection with this offering, is accurate only as of the date of those respective documents. Our business, financial condition, results of operations and prospects may have changed since those dates. You should read this prospectus, the documents incorporated by reference in this prospectus and any free writing prospectus that we have authorized for use in this prospectus and any free writing prospectus that we have authorized for use in connection with this offering, is accurate only as of the date of those respective documents. Our business, financial condition, results of operations and prospects may have changed since those dates. You should read this prospectus, the documents incorporated by reference in this prospectus and any free writing prospectus that we have authorized for use in connection with this offering, in their entirety before making an investment decision.

Unless otherwise indicated in this prospectus or the context otherwise requires, all references to "we," "us," "our," "the Company," and "Fortress" refer to Fortress Biotech, Inc. and its subsidiaries.

SA-1

PROSPECTUS SUMMARY

This summary highlights certain information about us, this offering and selected information contained elsewhere in or incorporated by reference into this prospectus. This summary is not complete and does not contain all of the information that you should consider before deciding whether to invest in our common stock. For a more complete understanding of our Company and this offering, we encourage you to read and consider carefully the more detailed information in this prospectus, including the information incorporated by reference into this prospectus, and the information referred to under the heading "Risk Factors" in this prospectus beginning on page SA-4, and in the documents incorporated by reference into this prospectus.

Our Company

Since inception in June 2006, we have been a biopharmaceutical company involved in the development of novel immunotherapy agents for the treatment of autoimmune diseases and cancer. In April 2015, we changed our name to Fortress Biotech, Inc. and began implementing our growth strategy to acquire, develop and commercialize novel pharmaceutical and biotechnology products. We plan to continue to develop and commercialize products both within Fortress and our subsidiaries, also referred to as the "Fortress Companies." In addition to our internal development programs, we plan to leverage our biopharmaceutical business expertise and drug development capabilities to help the Fortress Companies innovate, develop and commercialize products. Additionally, we will provide funding and management services to each of the Fortress Companies and, from time to time, we and the Fortress Companies will seek licensing, acquisitions, partnerships, joint ventures and/or public and private financings to accelerate and provide additional funding to support our research and development programs.

Pursuant to our growth strategy, in April 2016, we and our wholly owned subsidiary FBIO Acquisition, Inc. ("Acquisition Sub"), entered into an Agreement and Plan of Merger ("Merger Agreement") to acquire National Holdings Corporation ("NHLD"). As previously reported in our filings with the SEC, pursuant to the Merger Agreement (as subsequently amended in August 2016), we recently commenced a tender offer (the "Offer") for all of the issued and outstanding shares of NHLD's common stock, par value \$0.02 per share, at a purchase price of \$3.25 per share in cash, net to the seller in cash but subject to any required withholding of taxes. Following the completion of the Offer, if at least 80% of NHLD's stock is tendered (in addition to other conditions), Acquisition Sub will merge with and into NHLD, with NHLD surviving as our subsidiary ("Merger"). Provided that the Merger Agreement is not terminated early, we will file financial statements relating to NHLD and the Merger with the SEC prior to selling securities under this prospectus and any prospectus supplement hereto.

Corporate Information

We were incorporated in June 2006 under the laws of Delaware. Our principal executive offices are located at 2 Gansevoort Street, 9th Floor, New York, New York 10014, and our telephone number is (781) 652-4500. Our website address is www.fortressbiotech.com. Information found on, or accessible through, our website is not a part of, and is not incorporated into, this prospectus, and you should not consider it part of this prospectus or part of any prospectus supplement.

The Offering				
Common stock offered by us pursuant to this prospectus	Shares of our common stock having an aggregate offering price of up to \$53,000,000.			
Manner of offering	"At the market offering" that may be made from time to time on the Exchange or other market for our common stock in the United States through our agents, MLV and FBR. See the section entitled "Plan of Distribution" below.			
Use of proceeds	We intend to use the net proceeds of this offering for our operations, including, but not limited to, general corporate purposes, which may include research and development expenditures, clinical trial expenditures, manufacture and supply of product and working capital. See the section entitled "Use of Proceeds" below.			
Risk factors	See "Risk Factors" beginning on page SA-4 and the other information included in, or incorporated by reference into, this prospectus for a discussion of certain factors you should carefully consider before deciding to invest in shares of our common stock.			
NASDAQ Capital Market symbol	FBIO			

SA-3

RISK FACTORS

Investing in our securities involves a high degree of risk. You should consider carefully the risks and uncertainties described below together with the other information included in this prospectus and incorporated by reference herein, before deciding to purchase our securities. In addition, you should carefully consider, among other things, the section entitled "Risk Factors" beginning on page 12 of our Annual Report on Form 10-K for the fiscal year ended December 31, 2015, page 43 of our Quarterly Report on Form 10-Q for the quarter ended June 30, 2016, as well as any amendment or update to our risk factors in subsequent filings with the SEC, and other information in our consolidated financial statements, all of which are incorporated by reference into this prospectus. The risks described below and incorporated herein by reference are those which we believe are the material risks that we face. The occurrence of any of the following risks may materially and adversely affect our business, financial condition, results of operations, cash flows, reputation and future prospects. In this event, the market price of our common stock could decline, and you could lose part or all of your investment.

Risks Associated with our Capital Stock

Some of our executives, directors and principal stockholders can control our direction and policies, and their interests may be adverse to the interests of our other stockholders.

At June 30, 2016, Lindsay A. Rosenwald, M.D., our Chairman, President and Chief Executive Officer, beneficially owned 12.9% of our issued and outstanding capital stock. At June 30, 2016, Michael S. Weiss, our Executive Vice Chairman, Strategic Development, beneficially owned 15.3% of our issued and outstanding capital stock. By virtue of their holdings and membership on our Board of Directors, Dr. Rosenwald and Mr. Weiss may individually influence our management and our affairs and may make it difficult for us to consummate corporate transactions such as mergers, consolidations or the sale of all or substantially all of our assets that may be favorable from our standpoint or that of our other stockholders.

The market price of our Common Stock may be volatile and may fluctuate in a way that is disproportionate to our operating performance.

Our stock price may experience substantial volatility as a result of a number of factors, including:

- announcements we make regarding our or our subsidiaries' current product candidates, acquisition of potential new product candidates and companies and/or in-licensing through multiple subsidiaries;
- · sales or potential sales of substantial amounts of our common stock;
- our or our subsidiaries' delay or failure in initiating or completing pre-clinical or clinical trials or unsatisfactory results of any of these trials;
- announcements about us, our subsidiaries or about our competitors, including clinical trial results, regulatory approvals or new product introductions;
- · developments concerning our or our subsidiaries' licensors and/or product manufacturers;
- litigation and other developments relating to our or our subsidiaries' patents or other proprietary rights or those of our competitors;
- · conditions in the pharmaceutical or biotechnology industries;
- · governmental regulation and legislation;
- · variations in our anticipated or actual operating results; and
- change in securities analysts' estimates of our performance, or our failure to meet analysts' expectations.

Many of these factors are beyond our control. The stock markets in general, and the market for pharmaceutical and biotechnological companies in particular, have historically experienced extreme price and volume fluctuations. These fluctuations often have been unrelated or disproportionate to the operating performance of these companies. These broad market and industry factors could reduce the market price of our common stock, regardless of our actual operating performance.

Sales of a substantial number of shares of our common stock, or the perception that such sales may occur, may adversely impact the price of our common stock.

Almost all of the 48.7 million outstanding shares of our common stock as of August 17, 2016 are available for sale in the public market, either pursuant to Rule 144 under the Securities Act of 1933, as amended, or the Securities Act, or an effective registration statement. Pursuant to our shelf registration statement on Form S-3 of which this prospectus is a part, we may sell up to \$53 million of our equity securities over the next three years. Sales of a substantial number of shares of our common stock, or the perception that such sales may occur, may adversely impact the price of our common stock.

We have never paid and do not intend to pay cash dividends. As a result, capital appreciation, if any, will be your sole source of gain.

We have never paid cash dividends on any of our capital stock and we currently intend to retain future earnings, if any, to fund the development and growth of our business. In addition, the terms of existing and future debt agreements may preclude us from paying dividends. As a result, capital appreciation, if any, of our common stock will be your sole source of gain for the foreseeable future.

Provisions in our certificate of incorporation, our bylaws and Delaware law might discourage, delay or prevent a change in control of our Company or changes in our management and, therefore, depress the trading price of our common stock.

Provisions of our certificate of incorporation, our bylaws and Delaware law may have the effect of deterring unsolicited takeovers or delaying or preventing a change in control of our Company or changes in our management, including transactions in which our stockholders might otherwise receive a premium for their shares over then-current market prices. In addition, these provisions may limit the ability of stockholders to approve transactions that they may deem to be in their best interests. These provisions include:

- the inability of stockholders to call special meetings; and
- the ability of our Board of Directors to designate the terms of and issue new series of preferred stock without stockholder approval, which could include the right to approve an acquisition or other change in our control or could be used to institute a rights plan, also known as a poison pill, that would work to dilute the stock ownership of a potential hostile acquirer, likely preventing acquisitions that have not been approved by our Board of Directors.

In addition, the Delaware General Corporation Law ("DGCL") prohibits a publicly held Delaware corporation from engaging in a business combination with an interested stockholder, generally a person which together with its affiliates owns, or within the last three years, has owned 15% of our voting stock, for a period of three years after the date of the transaction in which the person became an interested stockholder, unless the business combination is approved in a prescribed manner.

The existence of the foregoing provisions and anti-takeover measures could limit the price that investors might be willing to pay in the future for shares of our common stock. They could also deter potential acquirers of our Company, thereby reducing the likelihood that you could receive a premium for your shares of our common stock in an acquisition.

Risks Associated with this Offering

We have broad discretion in the use of the net proceeds of this offering and may not use them effectively.

We intend to use the net proceeds from this offering for our operations, including, but not limited to, general corporate purposes, which may include research and development expenditures, clinical trial expenditures, manufacture and supply of product and working capital. However, our management will have broad discretion in the application of the net proceeds from this offering and could spend the proceeds in ways that do not improve our results of operations or enhance the value of our common stock. The failure by management to apply these funds effectively could result in financial losses that could have a material adverse effect on our business, cause the price of our common stock to decline, and delay our growth stategy, including but not limited to, the development and commercialization of our and our subsidiaries' product candidates.

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

Because the prices per share at which shares of our common stock are sold in this offering may be substantially higher than the book value per share of our common stock, you may suffer immediate and substantial dilution in the net tangible book value of the common stock you purchase in this offering. The shares sold in this offering, if any, will be sold from time to time at various prices. After giving effect to the sale of our common stock in the maximum aggregate offering amount of \$53 million at an assumed offering price of \$2.86 per share, the last reported sale price of our common stock on the Exchange on August 17, 2016, and after deducting estimated offering commissions payable by us, our net tangible book value as of June 30, 2016 would have been \$86.7, or \$1.27 per share of common stock. This represents an immediate increase in the net tangible book value of \$0.58 per share to our existing stockholders and an immediate and substantial dilution in net tangible book value of \$1.59 per share to new investors who purchase our common stock in the offering. See "Dilution" for a more detailed discussion of the dilution you may incur in connection with this offering.



FORWARD-LOOKING STATEMENTS

This prospectus, including the documents that we incorporate by reference, may contain forward-looking statements within the meaning of Section 27A of the Securities Act, and Section 21E of the Securities Exchange Act of 1934, as amended, or the Exchange Act. Statements in this prospectus, and documents we incorporate by reference, that are not descriptions of historical facts are forward-looking statements that are based on management's current expectations and are subject to risks and uncertainties that could negatively affect our business, operating results, financial condition and stock price. We have attempted to identify forward-looking statements by terminology including "anticipates," "believes," "can," "continue," "could," "estimates," "expects," "intends," "may," "might," "plans," "potential," "predicts," "should," or "will" or the negative of these terms or other comparable terminology. Factors that could cause actual results to differ materially from those currently anticipated include those set forth under "Risk Factors" including, in particular, risks relating to:

- our growth strategy;
- our ability to continue to commercialize products;
- our ability to identify, acquire, close and integrate product candidates and companies successfully and on a timely basis;
- · financing and strategic agreements, acquisitions and relationships;
- · our need for substantial additional funds and uncertainties relating to financings;
- · our ability to attract, integrate and retain key personnel;
- · the early stage of products under development;
- the results of research and development activities;
- · uncertainties relating to preclinical and clinical testing;
- · our ability to secure and maintain third-party manufacturing, marketing and distribution of our products;
- · dependence on third-party suppliers;
- · government regulation;
- · patent and intellectual property matters; and
- · competition.

You should read this prospectus and the documents that we reference herein completely and with the understanding that our actual future results may be materially different from what we currently expect. You should assume that the information appearing in this prospectus and any document incorporated by reference is accurate as of its date only. Because the risk factors referred to above could cause actual results or outcomes to differ materially from those expressed in any forward-looking statements made by us or on our behalf, you should not place undue reliance on any forward-looking statements. Further, any forward-looking statement speaks only as of the date on which it is made, and we undertake no obligation to update any forward-looking statement to reflect events or circumstances after the date on which the statement is made or to reflect the occurrence of unanticipated events. New factors emerge from time to time, and it is not possible for us to predict which factors will arise. In addition, we cannot assess the impact of each factor on our business or the extent to which any factor, or combination of factors, may cause actual results to differ materially from those contained in any forward-looking statements. We qualify all of the information presented in this prospectus, any accompanying prospectus supplement and any document incorporated herein by reference, and particularly our forward-looking statements, by these cautionary statements.

USE OF PROCEEDS

The amount of proceeds from this offering will depend upon the number of shares of our common stock sold and the market price at which they are sold. There can be no assurance that we will be able to sell any shares under or fully utilize the sales agreement with the Agents as a source of financing.

We intend to use the net proceeds of this offering for our operations, including, but not limited to, general corporate purposes, which may include research and development expenditures, clinical trial expenditures, manufacture and supply of product and working capital. The precise amount, use and timing of the application of such proceeds will depend upon our funding requirements and the availability and cost of other capital. Pending application of the net proceeds as described above, we intend to invest the net proceeds of the offering in short-term, investment-grade, interest-bearing securities and/or savings accounts.

	۸		7
3	Н	·-	1

DILUTION

If you invest in our common stock, your interest will be diluted to the extent of the difference between the price per share you pay in this offering and the net tangible book value per share of our common stock immediately after this offering. Our net tangible book value of our common stock as of June 30, 2016 was approximately \$33.8 million, or approximately \$0.69 per share of common stock based upon 48.7 million shares outstanding at that time. Net tangible book value per share is equal to our total tangible assets, less our total liabilities, divided by the total number of shares outstanding as of June 30, 2016.

After giving effect to the sale of our common stock in the aggregate amount of \$53 million at an assumed offering price of \$2.86 per share, the last reported sale price of our common stock on the Exchange on August 17, 2016, and after deducting estimated offering commissions payable by us, our net tangible book value as of June 30, 2016 would have been \$86.7 million, or \$1.27 per share of common stock based on 67.2 million shares of common stock outstanding on a pro forma basis at that time. This represents an immediate increase in net tangible book value of \$0.58 per share to our existing stockholders and an immediate dilution in net tangible book value of \$1.59 per share to new investors in this offering.

The following table illustrates this calculation on a per share basis as of June 30, 2016:

Offering price per share	\$ 2.86
Net tangible book value per share	\$ 0.69
Increase in net tangible book value per share attributable to the offering	\$ 0.58
Pro forma net tangible book value per share after giving effect to the offering	\$ 1.27
Dilution in net tangible book value per share to new investors	\$ 1.59

The foregoing table does not give effect to the exercise of any outstanding options or warrants, the vesting of restricted stock units, or stock grants that have been deferred pursuant to the Company's Deferred Compensation Plan for Directors dated March 12, 2015 (the "Deferred Compensation Plan"). To the extent options and warrants are exercised, restricted stock units vest, and stock grants are no longer deferred, there may be further dilution to new investors.

The number of shares of our common stock to be outstanding immediately after this offering on a pro forma basis is based on 48.7 million shares of our common stock outstanding as of June 30, 2016 and excludes:

- 515,068 shares issuable upon exercise of outstanding warrants as of June 30, 2016 with a weighted average exercise price of \$2.48;
- 1,754,365 shares issuable upon the exercise of outstanding options as of June 30, 2016 with a weighted average exercise price of \$4.41;
- · 1,716,000 shares issuable upon the vesting of outstanding restricted stock units as of June 30, 2016; and
- 420,000 shares issuable upon stock grants no longer deferred under the Deferred Compensation Plan as of June 30, 2016.

SA-8

DIVIDEND POLICY

We have never paid cash dividends and currently intend to retain all available funds and any future earnings to fund the development and expansion of our business. We do not anticipate paying any cash dividends in the foreseeable future.

PLAN OF DISTRIBUTION

We have entered into the sales agreement with the Agents under which we may offer and sell up to \$53,000,000 of shares of our common stock from time to time through the Agents. The sales agreement is filed with the SEC as an exhibit to our Current Report on Form 8-K dated August 17, 2016 and is incorporated herein by reference. The sales, if any, of shares of our common stock made under the sales agreement may be made by any method permitted by law deemed to be an "at the market offering" as defined in Rule 415 of the Securities Act, including, without limitation, sales made directly on the Exchange, on any other existing trading market for the common stock or through a market maker. In addition, with our prior consent, the Agents may also sell shares of our common stock by any other method permitted by law, including, but not limited to, negotiated transactions. We may instruct the Agents not to sell the shares of our common stock if the sales cannot be effected at or above the price designated by us from time to time. We or the Agents may suspend the offering of shares of our common stock upon notice and subject to other conditions. The Agents will not engage in any transactions that stabilizes the price of our common stock.

Each time we wish to issue and sell shares of our common stock under the sales agreement, we will notify either of the Agents of the number of shares to be issued, the dates on which such sales are anticipated to be made, any minimum price below which sales may not be made and other sales parameters as we deem appropriate. Once we have so instructed the Agent, unless such Agent declines to accept the terms of the notice, the Agent shall use commercially reasonable efforts consistent with its respective normal trading and sales practices to sell such shares up to the amount specified on such terms. The obligations of the Agents under the sales agreement to sell shares of our common stock are subject to a number of conditions that we must meet.

We will pay each Agent a commission for its services in acting as agent in the sale of the shares of our common stock. The Agents will be entitled to compensation at a commission rate of up to 3.0% of the gross proceeds from each sale of our common stock. Because there is no minimum offering amount required as a condition to close this offering, the actual total public offering amount, commissions and proceeds to us, if any, are not determinable at this time. In connection with the sale of the common stock on our behalf, each of the Agents will be deemed to be an "underwriter" within the meaning of the Securities Act and the compensation of the Agents will be deemed to be underwriting commissions or discounts. We have agreed to provide indemnification and contribution to the Agents against certain civil liabilities, including liabilities under the Securities Act. We estimate that the total expenses for the offering, excluding compensation payable to the Agents under the terms of the sales agreement, will be approximately \$million.

Settlement for sales of shares of our common stock will occur on the third business day following the date on which any sales are made, or on another date that is agreed upon by us and the Agents in connection with a particular transaction, in return for payment of the net proceeds to us. There is no arrangement for funds to be received in an escrow, trust or similar arrangement.

The offering pursuant to the sales agreement will terminate upon the earlier of (i) the issuance and sale of all common shares subject to the agreement or (ii) termination of the sales agreement as permitted therein.

MLV & Co. LLC is an affiliate of FBR Capital Markets & Co.

The Agents and their respective affiliates may in the future provide various investment banking and other financial services for us and our affiliates, for which services they may in the future receive customary fees. To the extent required by Regulation M, the Agents will not engage in any market making activities involving our common stock while the offering is ongoing under this prospectus.

LEGAL MATTERS

Wyrick Robbins Yates & Ponton LLP, Raleigh, North Carolina, has passed upon the validity of the shares of common stock offered under this prospectus. Duane Morris LLP, Newark, New Jersey, is counsel for the Agents in connection with this offering.

EXPERTS

The consolidated balance sheets of Fortress Biotech, Inc. as of December 31, 2015 and 2014 and the related consolidated statements of operations, stockholders' equity, and cash flows for each of the years then ended have been audited by EisnerAmper LLP, independent registered public accounting firm, as stated in their reports, which are incorporated herein by reference, which reports (1) express an unqualified opinion on the financial statements have been incorporated herein by reference in reliance on the reports of such firm given upon their authority as experts in accounting and auditing.

The consolidated financial statements for the year ended December 31, 2013 incorporated in this prospectus by reference to the Annual Report on Form 10-K for the year ended December 31, 2015 have been so incorporated in reliance on the report of PricewaterhouseCoopers LLP, an independent registered public accounting firm, given on the authority of said firm as experts in auditing and accounting.

WHERE YOU CAN FIND ADDITIONAL INFORMATION

We are subject to the reporting requirements of the Exchange Act, and file annual, quarterly and current reports, proxy statements and other information with the SEC. You may read and copy these reports, proxy statements and other information at the SEC's public reference facilities at 100 F Street, N.E., Room 1580, Washington, D.C. 20549. You can request copies of these documents by writing to the SEC and paying a fee for the copying cost. Please call the SEC at 1-800-SEC-0330 for more information about the operation of the public reference facilities. SEC filings are also available at the SEC's web site at http://www.sec.gov.

This prospectus is only part of a registration statement on Form S-3 that we have filed with the SEC under the Securities Act, and therefore omits certain information contained in the registration statement. We have also filed exhibits and schedules with the registration statement that are excluded from this prospectus, and you should refer to the applicable exhibit or schedule for a complete description of any statement referring to any contract or other document. You may inspect a copy of the registration statement, including the exhibits and schedules, without charge, at the public reference facilities or obtain a copy from the SEC upon payment of the fees prescribed by the SEC.

INCORPORATION OF CERTAIN DOCUMENTS BY REFERENCE

The SEC allows us to "incorporate by reference" information we file with it into our registration statement of which this prospectus is a part, which means that we can disclose important information to you by referring you to other documents. The information incorporated by reference is considered to be part of this prospectus, and information that we file later with the SEC and incorporate by reference will automatically update and supersede this information. We incorporate by reference into this prospectus the documents listed below and all future filings made by us with the SEC under Section 13(a), 13(c), 14 or 15(d) of the Exchange Act, except for information "furnished" under Items 2.02, 7.01 or 9.01 on Form 8-K or other information "furnished" to the SEC which is not deemed filed and not incorporated in this prospectus, until the termination of the offering of securities described in the applicable prospectus supplement.

We hereby incorporate by reference the following documents:

- (a) our Annual Report on Form 10-K for the year ended December 31, 2015, filed with the SEC on March 15, 2016 including the information specifically incorporated by reference into the Annual Report on Form 10-K from our definitive proxy statement for the 2016 Annual Meeting of Stockholders;
- (b) our Quarterly Report on Form 10-Q for the quarter ended March 31, 2016, filed with the SEC on May 10, 2016;
- (c) our Quarterly Report on Form 10-Q for the quarter ended June 30, 2016, filed with the SEC on August 9, 2016;
- (d) our Current Reports on Form 8-K filed on January 7, 2016, April 18, 2016, April 21, 2016, April 28, 2016, May 4, 2016, May 6, 2016, May 26, 2016, June 1, 2016, June 21, 2016, August 12, 2016 and August 17, 2016; and
- (e) the description of our common stock included in our registration statement on Form 8-A, filed with the SEC on December 7, 2011.

Any statement contained in this prospectus or in a document incorporated or deemed to be 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 any other subsequently filed document that is deemed to be incorporated by reference into this prospectus modifies or supersedes such statement. Any statement so modified or superseded will not be deemed, except as so modified or superseded, to constitute a part of this registration statement.

We will furnish without charge to you, on written or oral request, a copy of any or all of the documents incorporated by reference, including exhibits to these documents. You should direct any requests for documents in writing to: Fortress Biotech, Inc., 2 Gansevoort Street, 9th Floor, New York, New York 10014, Attention: Corporate Secretary, tel: 781-652-4500. These documents are also available on the Investors section of our website, which is located at www.fortressbiotech.com, or as described under "Where You Can Find Additional Information" above. The reference to our website address does not constitute incorporation by reference of the information contained on our website.

You should rely only on information contained in, or incorporated by reference into, this prospectus and any prospectus supplement. We have not authorized anyone to provide you with information different from that contained in this prospectus or incorporated by reference in this prospectus. We are not making offers to sell the securities in any jurisdiction in which such an offer or solicitation is not authorized or in which the person making such offer or solicitation is not qualified to do so or to anyone to whom it is unlawful to make such offer or solicitation.

\$53,000,000



Common Stock

PROSPECTUS

FBR

MLV & Co.

The date of this prospectus is , 2016
PART II

INFORMATION NOT REQUIRED IN PROSPECTUS

ITEM 14. Other Expenses of Issuance and Distribution.

We estimate that expenses payable by us in connection with the offering described in this registration statement will be as follows:

SEC registration fee	\$ 0
Legal fees and expenses	\$ *
Accounting fees and expenses	\$ *
Printing expenses	\$ *
Miscellaneous	\$ *
Total	\$ *

* Estimated expenses are presently not known and cannot be estimated.

II-1

ITEM 15. Indemnification of Directors and Officers.

Bylaws

Pursuant to our bylaws, our directors and officers will be indemnified to the fullest extent allowed under the laws of the State of Delaware for their actions in their capacity as our directors and officers.

We must indemnify any person made a party to any threatened, pending, or completed action, suit, or proceeding, whether civil, criminal, administrative, or investigative ("Proceeding"), by reason of the fact that he is or was a director, against judgments, penalties, fines, settlements and reasonable expenses (including attorney's fees) ("Expenses") actually and reasonably incurred by him in connection with such Proceeding if: (a) he conducted himself in good faith, and: (i) in the case of conduct in his own official capacity with us, he reasonably believed his conduct to be in our best interests, or (ii) in all other cases, he reasonable believes his conduct to be at least not opposed to our best interests; and (b) in the case of any criminal Proceeding, he had no reasonable cause to believe his conduct was unlawful.

We must indemnify any person made a party to any Proceeding by or in the right of us, by reason of the fact that he is or was a director, against reasonable Expenses actually incurred by him in connection with such Proceeding if he conducted himself in good faith, and: (a) in the case of conduct in his official capacity with us, he reasonably believed his conduct to be in our best interests; or (b) in all other cases, he reasonably believed his conduct to be at least not opposed to our best interests; provided that no such indemnification may be made in respect of any Proceeding in which such person shall have been adjudged to be liable to us.

No indemnification will be made unless authorized in the specific case after a determination that indemnification of the director is permissible in the circumstances because he has met the applicable standard of conduct.

Reasonable Expenses incurred by a director who is party to a Proceeding may be paid or reimbursed by us in advance of the final disposition of such Proceeding in certain cases.

We have the power to purchase and maintain insurance on behalf of any person who is or was our director, officer, employee, or agent or is or was serving at our request as an officer, employee or agent of another corporation, partnership, joint venture, trust, other enterprise, or employee benefit plan against any liability asserted against him and incurred by him in any such capacity or arising out of his status as such, whether or not we would have the power to indemnify him against such liability under the provisions of the amended and restated bylaws.

Delaware Law

We are incorporated under the laws of the State of Delaware. Section 145 of the DGCL provides that a Delaware corporation may indemnify any persons who are, or are threatened to be made, parties to any threatened, pending or completed action, suit or proceeding, whether civil, criminal, administrative or investigative (other than an action by or in the right of such corporation), by reason of the fact that such person was an officer, director, employee or agent of such corporation, or is or was serving at the request of such person as an officer, director, employee or agent of another corporation or enterprise. The indemnity may include expenses (including attorneys' fees), judgments, fines and amounts paid in settlement actually and reasonably incurred by such person in connection with such action, suit or proceeding, provided that such person acted in good faith and in a manner he or she reasonably believed to be in or not opposed to the corporation's best interests and, with respect to any criminal action or proceeding, had no reasonable cause to believe that his or her conduct was illegal. A Delaware corporation may indemnify any persons who are, or are threatened to be made, a party to any threatened, pending or completed action or suit by or in the right of the corporation by reason of the fact that such person was a director, officer, employee or agent of such corporation, or is or was serving at the request of such corporation as a director, officer, employee or agent of another corporation or enterprise. The indemnity may include expenses (including attorneys' fees) actually and reasonably incurred by such person in connection with the defense or settlement of such action or suit provided such person acted in good faith and in a manner he or she reasonably believed to be in or not opposed to the corporation's best interests except that no indemnification is permitted without judicial approval if the officer or director is adjudged to be liable to the corporation. Where an officer or director is successful on the merits or otherwise in the defense of any action referred to above, the corporation must indemnify him or her against the expenses which such officer or director has actually and reasonably incurred. Our certificate of incorporation and bylaws provide for the indemnification of our directors and officers to the fullest extent permitted under the DGCL.

Section 102(b)(7) of the DGCL permits a corporation to provide in its certificate of incorporation that a director of the corporation shall not be personally liable to the corporation or its stockholders for monetary damages for breach of fiduciary duties as a director, except for liability for any:

transaction from which the director derives an improper personal benefit;

- act or omission not in good faith or that involves intentional misconduct or a knowing violation of law;
- · unlawful payment of dividends or redemption of shares; or
- · breach of a director's duty of loyalty to the corporation or its stockholders.

Our certificate of incorporation includes such a provision. Expenses incurred by any officer or director in defending any such action, suit or proceeding in advance of its final disposition shall be paid by us upon delivery to us of an undertaking, by or on behalf of such director or officer, to repay all amounts so advanced if it shall ultimately be determined that such director or officer is not entitled to be indemnified by us.

Section 174 of the DGCL provides, among other things, that a director who willfully or negligently approves of an unlawful payment of dividends or an unlawful stock purchase or redemption may be held liable for such actions. A director who was either absent when the unlawful actions were approved, or dissented at the time, may avoid liability by causing his or her dissent to such actions to be entered in the books containing minutes of the meetings of the board of directors at the time such action occurred or immediately after such absent director receives notice of the unlawful acts.

Indemnification Agreements

As permitted by the DGCL, we have entered, and intend to continue to enter, into separate indemnification agreements with each of our directors and executive officers, that require us to indemnify such persons against any and all expenses (including attorneys' fees), witness fees, damages, judgments, fines, settlements and other amounts incurred (including expenses of a derivative action) in connection with any action, suit or proceeding, whether actual or threatened, to which any such person may be made a party by reason of the fact that such person is or was a director, an officer or an employee of us or any of our affiliated enterprises, provided that such person acted in good faith and in a manner such person reasonably believed to be in or not opposed to our best interests and, with respect to any criminal proceeding, had no reasonable cause to believe his or her conduct was unlawful. The indemnification agreements also set forth certain procedures that will apply in the event of a claim for indemnification thereunder.

At present, there is no proceeding or pending litigation involving any of our directors or executive officers as to which indemnification is required or permitted, and we are not aware of any proceeding or threatened litigation that may result in a claim for indemnification.

We have an insurance policy covering our officers and directors with respect to certain liabilities, including liabilities arising under the Securities Act or otherwise.

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

ITEM 16. Exhibits

(a) Exhibits

See Exhibit Index.

(b) Financial statement schedule.

None.

ITEM 17. Undertakings

- (a) The undersigned registrant hereby undertakes:
 - (1) To file, during any period in which offers or sales are being made, a post-effective amendment to this registration statement:
 - (i) To include any prospectus required by Section 10(a)(3) of the Securities Act of 1933;

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

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

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

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

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

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

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

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

(6) That, for the purpose of determining liability of the registrant under the Securities Act of 1933 to any purchaser in the initial distribution of the securities:

The undersigned registrant undertakes that in a primary offering of securities of the undersigned registrant pursuant to this registration statement, regardless of the underwriting method used to sell the securities to the purchaser, if the securities are offered or sold to such purchaser by means of any of the following communications, the undersigned registrant will be a seller to the purchaser and will be considered to offer or sell such securities to such purchaser:

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

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

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

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

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

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

(i) The undersigned registrant hereby undertakes that:

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

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

• •		
	- 2	

SIGNATURES

Pursuant to the requirements of the Securities Act of 1933, the registrant certifies that it has reasonable grounds to believe that it meets all of the requirements for filing on Form S-3 and has duly caused this registration statement to be signed on its behalf by the undersigned, thereunto duly authorized, in the City of New York, State of New York, on August 18, 2016.

Fortress Biotech, Inc.

By: /s/ Lindsay A. Rosenwald, M.D.

Name: Lindsay A. Rosenwald, M.D. Title: Chairman, President and Chief Executive Officer

NOW ALL MEN BY THESE PRESENTS that each individual whose signature appears below constitutes and appoints Lindsay A. Rosenwald as his or her true and lawful attorney-in-fact and agent with full power of substitution and resubstitution, for him or her and in his or her name, place and stead, in any and all capacities, to sign any and all amendments (including post-effective amendments) to this registration statement, including a prospectus or an amended prospectus therein and registration statements filed pursuant to Rules 413 or 462 under the Securities Act of 1933, as amended, and to file the same, with all exhibits thereto, and all documents in connection therewith, with the Securities and Exchange Commission, granting unto said attorney-in-fact and agent full power and authority to do and perform each and every act and thing requisite and necessary to be done in and about the premises, as fully to all intents and purposes as he or she might or could do in person, hereby ratifying and confirming all that said attorneys-in-fact and agents, or their substitutes, may lawfully do or cause to be done by virtue hereof.

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

Signature	Title	Date
/s/ Lindsay A. Rosenwald, M.D. Lindsay A. Rosenwald, M.D.	Chairman of the Board of Directors, President and Chief Executive Officer (principal executive officer)	August 18, 2016
/s/ Lucy Lu, M.D. Lucy Lu, M.D.	Executive Vice President and Chief Financial Officer (principal financial officer)	August 18, 2016
/s/ Michael S. Weiss Michael S. Weiss	Executive Vice Chairman, Strategic Development and Director	August 18, 2016
/s/ Eric K. Rowinsky, M.D. Eric K. Rowinsky, M.D.	Co-Vice Chairman of the Board of Directors and Director	August 18, 2016
/s/ Jimmie Harvey, Jr., M.D. Jimmie Harvey, Jr., M.D.	Director	August 18, 2016
/s/ Malcolm Hoenlein Malcolm Hoenlein	Director	August 18, 2016
/s/ Dov Klein Dov Klein	Director	August 18, 2016
/s/ J. Jay Lobell J. Jay Lobell	Director	August 18, 2016

Exhibit Number		Incorporated by Reference (Unless Otherwise Indicated)			
	Exhibit Description	Form	File No.	Exhibit	Filing Date
1.1*	Form of underwriting agreement with respect to common stock, preferred stock and/or warrants.	_	_	_	_
4.1	Amended and Restated Certificate of Incorporation of the registrant.	10-12G	000-54463	3.1	July 15, 2011
4.2	First Certificate of Amendment of Amended and Restated Certificate of Incorporation of the registrant.	10-12G	000-54463	3.2	July 15, 2011
4.3	Second Amended and Restated Bylaws of the registrant.	8-K	_	3.7	October 31, 2014
4.4	Second Certificate of Amendment of Amended and Restated Certificate of Incorporation, as amended.	10-K	_	3.8	March 14, 2014
4.5	Form of Common Stock Certificate.	10-12G	000-54463	4.1	July 15, 2011
4.6*	Form of underwriter warrant, if any.	—	—	—	—
4.7*	Form of specimen preferred stock certificate, if any.	—	—	—	—
4.8*	Certificate of designation for preferred stock, if any.		—	_	_
4.9*	Form of warrant agreement and warrant certificate, if any.	—	_	—	_
4.10*	Form of unit agreement and unit certificate, if any.	—	—	—	_
5.1	Opinion of Wyrick Robbins Yates & Ponton LLP.	_	_	—	Filed Herewith
10.32	Amended and Restated At Market Issuance Sales Agreement, dated August 17, 2016, between the registrant, MLV & Co. LLC and FBR Capital Markets & Co.	8-K	_	_	August 17, 2016
23.1	Consent of EisnerAmper LLP, Independent Registered Public Accounting Firm.	_	_	_	Filed Herewith
23.2	Consent of PricewaterhouseCoopers LLP, Independent Registered Public Accounting Firm.	_	_	_	Filed Herewith
23.3	Consent of Wyrick Robbins Yates & Ponton LLP (included in Exhibit 5.1)	_	_	_	Filed Herewith
24.1	Power of Attorney (included on Signature Page)	_	_	_	Filed Herewith

EXHIBIT INDEX

* To the extent applicable, to be filed by a post-effective amendment or as an exhibit to a document filed under the Exchange Act and incorporated by reference herein.



August 18, 2016

Board of Directors Fortress Biotech, Inc. 2 Gansevoort Street, 9th Floor New York, New York 10014

Ladies and Gentlemen:

Wyrick Robbins Yates & Ponton LLP ATTORNEYS AT LAW 4101 Lake Boone Trail, Suite 300, Raleigh, NC 27607 PO Drawer 17803, Raleigh, NC 27619 P: 919.781.4000 F: 919.781.4865 www.wyrick.com

We have acted as counsel to Fortress Biotech, Inc., a Delaware corporation (the "Company"), in connection with the registration statement on Form S-3, to be filed by the Company with the Securities and Exchange Commission (the "Commission") on the date hereof (the "Registration Statement") pursuant to the Securities Act of 1933, as amended (the "Act"), relating to up to \$53,000,000 of one or more of the following securities (collectively, the "Securities") which may be issued by the Company, from time to time, under the Registration Statement: (i) shares of the Company's common stock, \$0.001 par value per share (the "Common Stock"), which may include shares of Common Stock issuable upon the conversion or exercise of the other offered securities included in the Registration Statement, (ii) shares of the Company's preferred stock, \$0.001 par value per share (the "Preferred Stock"), which may include shares of Preferred Stock issuable upon the conversion or exercise of Warrants (as defined herein) included in the Registration Statement, (iii) warrants (the "Warrants") to purchase Common Stock or Preferred Stock, and (iv) unit ("Units") comprised of any combination of the foregoing Securities.

We also have acted as counsel to the Company in connection with an offering of up to \$53,000,000 of shares of Common Stock that may be issued and sold (the "Sales Agreement Shares") under the Amended and Restated At Market Issuance Sales Agreement executed by the Company, MLV & Co. LLC and FBR Capital Markets & Co. on August 17, 2016 (the "Sales Agreement"). The prospectus for the offer and sale of the Sales Agreement Shares is included in the Registration Statement (as may be amended or supplemented, the "Sales Agreement Prospectus").

In connection with the foregoing, we have relied upon, among other things, our examination of such documents, records of the Company and certificates of its officers and public officials as we deemed necessary for purposes of the opinions expressed below. In our examination, we have assumed the genuineness of all signatures, the authenticity of all documents submitted to us as originals and the conformity with the original of all documents submitted to us as copies thereof. We have also assumed, without independent investigation, that upon the issuance of Common Stock or Preferred Stock by the Company pursuant to the Registration Statement and/or Sales Agreement Prospectus, including upon exercise or conversion of any Warrants and/or Units, the total number of shares of Common Stock or Preferred Stock issued and outstanding will not exceed the total number of shares of Common Stock or Preferred Stock, as applicable, that the Company is then authorized to issue under its Certificate of Incorporation, as currently in effect, and other relevant documents. Board of Directors Fortress Biotech, Inc. August 18, 2016 Page 2

Based upon the foregoing, we are of the opinion that:

1. With respect to any offering of Common Stock by the Company pursuant to the Registration Statement other than pursuant to the Sales Agreement (the "Offered Common Stock"), when (a) the Registration Statement has become effective under the Act, (b) the board of directors or any duly designated committee thereof has adopted resolutions approving the issuance and sale of the Offered Common Stock at a specified price or pursuant to a specified pricing mechanism, (c) if the Offered Common Stock is to be sold in a firm commitment underwritten offering or in a best efforts placement offering, an underwriting agreement or placement agency agreement with respect to the Offered Common Stock has been duly authorized, executed and delivered by the Company and the other parties thereto, (d) certificates representing the shares of Offered Common Stock have been duly executed by appropriate officers of the Company or appropriate book entries have been made in the stock records of the Company, and (e) the shares of Offered Common Stock have been duly and properly sold, paid for and delivered as contemplated in the Registration Statement, any prospectus supplement relating thereto and, if applicable, in accordance with the applicable underwriting or other purchase agreement, the shares of Offered Common Stock, will be duly authorized, validly issued, fully paid and non-assessable.

2. With respect to any offering of Preferred Stock by the Company pursuant to the Registration Statement (the "Offered Preferred Stock"), when (a) the Registration Statement has become effective under the Act, (b) the board of directors or any duly designated committee thereof has adopted resolutions approving the issuance and sale of the Offered Preferred Stock at a specified price or pursuant to a specified pricing mechanism, (c) a certificate of designation with respect to the Offered Preferred Stock has been filed with and accepted for filing by the Delaware Secretary of State, (d) if the Offered Preferred Stock is to be sold in a firm commitment underwritten offering or in a best efforts placement offering, an underwriting agreement or placement agency agreement with respect to the Offered Preferred Stock has been duly authorized, executed and delivered by the Company and the other parties thereto, (e) certificates representing the shares of Offered Preferred Stock have been duly executed by appropriate officers of the Company or appropriate book entries have been made in the stock records of the Company, and (f) the shares of Offered Preferred Stock have been duly and properly sold, paid for and delivered as contemplated in the Registration Statement, any prospectus supplement relating thereto and, if applicable, in accordance with the applicable underwriting or other purchase agreement, the shares of Offered Preferred Stock, will be duly authorized, validly issued, fully paid and non-assessable.

Board of Directors Fortress Biotech, Inc. August 18, 2016 Page 3

3. With respect to any offering of Warrants by the Company pursuant to the Registration Statement (the "Offered Warrants"), when (a) the Registration Statement has become effective under the Act, (b) the board of directors or any duly designated committee thereof has adopted resolutions approving the form, terms, issuance and sale of the Offered Warrants at a specified price or pursuant to a specified pricing mechanism, (c) if the Offered Warrants are to be sold in a firm commitment underwritten offering or in a best efforts placement offering, an underwriting agreement or placement agency agreement with respect to the Offered Warrants has been duly authorized, executed and delivered by the Company and the other parties thereto, and (d) the Offered Warrants have been duly and properly sold, paid for and delivered as contemplated in the Registration Statement, any prospectus supplement relating thereto and, if applicable, in accordance with the applicable underwriting or other purchase agreement and otherwise in accordance with the provisions of any applicable warrant agreement (the "Warrant Agreement") between the Company and the purchaser or warrant agent named therein, the Offered Warrants will constitute valid and binding obligations of the Company, enforceable against the Company in accordance with their terms.

4. With respect to any offering of Units by the Company pursuant to the Registration Statement (the "Offered Units"), when (a) the Registration Statement has become effective under the Act, (b) when the board of directors has taken all necessary corporate action to authorize and approve the form, issuance, execution and terms of the Offered Units, the related unit agreements between the Company and the unit agent or purchaser named therein ("Unit Agreements"), if any, and any offered securities which are components of such Offered Units, the terms of the offering thereof and related matters, (c) if the Offered Units are to be sold in a firm commitment underwritten offering or in a best efforts placement offering, an underwriting agreement or placement agency agreement with respect to the Offered Units has been duly authorized, executed and delivered by the Company and the other parties thereto, and (d) the (1) Offered Units, (2) the Unit Agreements, if any, and (3) such offered securities that are components of such Offered Units have been duly and properly sold, paid for and delivered as contemplated in the Registration Statement, any prospectus supplement relating thereto and, if applicable, in accordance with the applicable underwriting or other purchase agreement and otherwise in accordance with the provisions of any applicable (i) Unit Agreement and (ii) Warrant Agreement, in the case of Warrants, such Units will be validly issued and will entitle the holder thereof to the rights specified in the Unit Agreements, if any.

5. With respect to the Sales Agreement Shares, when (a) the Registration Statement has become effective under the Act, (b) a definitive Sales Agreement Prospectus is filed with the Commission, and (c) the Sales Agreement Shares have been duly and properly sold, paid for and delivered as contemplated in the Registration Statement and Sales Agreement Prospectus, the Sales Agreement Shares will be duly authorized, validly issued, fully paid and non-assessable.

This opinion is limited to the Delaware General Corporation Law, including the statutory provisions of the Delaware General Corporate Law and all applicable provisions of the Delaware Constitution and reported judicial decisions interpreting these laws. We hereby consent to the filing of this opinion with the Commission as Exhibit 5.1 to the Registration Statement and reference to our firm under the heading "Legal Matters" in the prospectuses included therein. In giving this consent, we do not admit that we are within the category of persons whose consent is required by Section 7 of the Securities Act or the rules and regulations promulgated thereunder by the Commission.

Very truly yours,

/s/ Wyrick Robbins Yates & Ponton LLP

CONSENT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

We consent to the incorporation by reference in this Registration Statement of Fortress Biotech, Inc. on Form S-3 to be filed on or about August 18, 2016 of our report dated March 15, 2016, on our audits of the consolidated financial statements as of December 31, 2015 and 2014 and for each of the years then ended, and the effectiveness of Fortress Biotech, Inc.'s internal control over financial reporting as of December 31, 2015, which reports were included in the Annual Report on Form 10-K filed March 15, 2016. We also consent to the reference to our firm under the caption "Experts" in the Registration Statement on Form S-3.

/s/ EISNERAMPER LLP New York, NY August 18, 2016

CONSENT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

We hereby consent to the incorporation by reference in this Registration Statement on Form S-3 of Fortress Biotech, Inc. (formerly known as Coronado Biosciences, Inc.) of our report dated March 14, 2014 relating to the financial statements, which appears in Fortress Biotech, Inc.'s (formerly known as Coronado Biosciences, Inc.) Annual Report on Form 10-K for the year ended December 31, 2015. We also consent to the reference to us under the heading "Experts" in such Registration Statement.

/s/ PricewaterhouseCoopers LLP Boston, Massachusetts August 18, 2016