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**UNITED STATES  
SECURITIES AND EXCHANGE COMMISSION**  
Washington, DC 20549

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**FORM 8-K**

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**Current Report Pursuant  
to Section 13 or 15(d) of the  
Securities Exchange Act of 1934**

Date of Report (Date of earliest event Reported): **February 10, 2020**

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**THERAVANCE BIOPHARMA, INC.**  
(Exact Name of Registrant as Specified in its Charter)

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**Cayman Islands**  
(State or Other Jurisdiction of  
Incorporation)

**001-36033**  
(Commission File Number)

**98-1226628**  
(I.R.S. Employer Identification Number)

**PO Box 309  
Ugland House, South Church Street  
George Town, Grand Cayman, Cayman Islands KY1-1104  
(650) 808-6000**

(Addresses, including zip code, and telephone numbers, including area code, of principal executive offices)

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Check the appropriate box below if the Form 8-K filing is intended to simultaneously satisfy the filing obligation of the registrant under any of the following provisions (see General Instruction A.2. below):

- Written communications pursuant to Rule 425 under the Securities Act (17 CFR 230.425)
- Soliciting material pursuant to Rule 14a-12 under the Exchange Act (17 CFR 240.14a-12)
- Pre-commencement communications pursuant to Rule 14d-2(b) under the Exchange Act (17 CFR 240.14d-2(b))
- Pre-commencement communications pursuant to Rule 13e-4(c) under the Exchange Act (17 CFR 240.13e-4(c))

Securities registered pursuant to Section 12(b) of the Act:

<b>Title of each class</b>	<b>Trading Symbol(s)</b>	<b>Name of each exchange on which registered</b>
Ordinary Share \$0.00001 Par Value	TBPH	The Nasdaq Global Market

Indicate by check mark whether the registrant is an emerging growth company as defined in Rule 405 of the Securities Act of 1933 (§ 230.405 of this chapter) or Rule 12b-2 of the Securities Exchange Act of 1934 (§ 240.12b-2 of this chapter).

Emerging growth company

If an emerging growth company, indicate by check mark if the registrant has elected not to use the extended transition period for complying with any new or revised financial accounting standards provided pursuant to Section 13(a) of the Exchange Act.

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### **Item 1.01. Entry into a Material Definitive Agreement.**

On February 11, 2020, Theravance Biopharma, Inc., a Cayman Islands exempted company (“Theravance Biopharma” or “we”), entered into an underwriting agreement (the “Underwriting Agreement”) with Morgan Stanley & Co. LLC, J.P. Morgan Securities LLC, and Cowen and Company, LLC, as representatives of the several underwriters set forth therein (collectively, the “Underwriters”), relating to an underwritten public offering (the “Offering”) of 5,500,000 ordinary shares (the “Firm Shares”), par value \$0.00001 per share, at an offering price to the public of \$27.00 per share. Under the terms of the Underwriting Agreement, Theravance Biopharma granted the Underwriters a 30-day option to purchase up to an additional 825,000 ordinary shares (the “Option Shares” and together with the Firm Shares, the “Shares”) on the same terms and conditions.

The Shares will be issued pursuant to Theravance Biopharma’s currently effective shelf registration statement on Form S-3 and an accompanying prospectus (File No. 333-235339) filed with the Securities and Exchange Commission (the “Commission”), which became effective automatically on December 3, 2019 (the “Registration Statement”), and a prospectus supplement filed with the Commission in connection with the Offering. The closing of the Offering is expected to take place on or about February 14, 2020, subject to the satisfaction of customary closing conditions.

The Underwriting Agreement contains customary representations, warranties and agreements by Theravance Biopharma, customary conditions to closing, indemnification obligations of Theravance Biopharma and the Underwriters, including for liabilities under the Securities Act of 1933, as amended, other obligations of the parties and termination provisions. The representations, warranties and covenants contained in the Underwriting Agreement were made only for purposes of such agreement and as of specific dates, were solely for the benefit of the parties to such agreement, and may be subject to limitations agreed upon by the contracting parties, including being qualified by confidential disclosures exchanged between the parties in connection with the execution of the Underwriting Agreement.

A copy of the Underwriting Agreement is attached as Exhibit 1.1 hereto and is incorporated herein by reference. The foregoing description of the Underwriting Agreement does not purport to be complete and is qualified in its entirety by reference to such exhibit.

A copy of the opinion of Maples and Calder relating to the validity of the issuance and sale of the Shares in the Offering is attached as Exhibit 5.1 hereto.

### **Item 2.02. Results of Operations and Financial Condition.**

On February 10, 2020, Theravance Biopharma filed with the Commission a preliminary prospectus supplement to the Registration Statement (the “Preliminary Prospectus Supplement”) pursuant to Rule 424(b)(5) under the Securities Act of 1933, as amended, relating to the Offering. Theravance Biopharma included the following disclosure in the Preliminary Prospectus Supplement:

“We are currently finalizing our financial results for the year ended December 31, 2019. The financial results discussed below as of December 31, 2019 are preliminary and subject to completion of financial and operating closing procedures. The results below are not a comprehensive statement of our financial results as of December 31, 2019, and our actual results may differ materially from these amounts following the completion of our financial and operating closing procedures, or as a result of other adjustments or developments that may arise before the results as of December 31, 2019 are finalized. In addition, even if our actual results are consistent with these preliminary results, those results or developments may not be indicative of results or developments in subsequent periods.

We expect to report that our cash, cash equivalents and marketable securities were approximately \$285.8 million as of December 31, 2019.”

### **Item 8.01. Other Events.**

The Preliminary Prospectus Supplement contains updates to the summary description of Theravance Biopharma’s business and such updates are reflected in the section entitled “Summary,” which is attached hereto as Exhibit 99.1 and incorporated herein by reference, and updated risk factors in the section entitled “Risk Factors,” which is attached hereto as Exhibit 99.2 and incorporated herein by reference.

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ITEM 9.01. FINANCIAL STATEMENTS AND EXHIBITS.

(d) Exhibits.

<b>Exhibit No.</b>	<b>Description</b>
<a href="#">1.1</a>	<a href="#">Underwriting Agreement among Theravance Biopharma, Morgan Stanley &amp; Co. LLC, J.P. Morgan Securities LLC and Cowen and Company, LLC, as representatives of the several underwriters, dated February 11, 2020</a>
<a href="#">5.1</a>	<a href="#">Opinion of Maples and Calder</a>
<a href="#">23.1</a>	<a href="#">Consent of Maples and Calder (contained in Exhibit 5.1)</a>
<a href="#">99.1</a>	<a href="#">Excerpt of “Summary” section included in Theravance Biopharma’s Preliminary Prospectus Supplement, dated February 10, 2020, to the Registration Statement on Form S-3 (File No. 333-235339)</a>
<a href="#">99.2</a>	<a href="#">Excerpt of “Risk Factors” section included in Theravance Biopharma’s Preliminary Prospectus Supplement, dated February 10, 2020, to the Registration Statement on Form S-3 (File No. 333-235339)</a>
104	Cover Page Interactive Data File (cover page XBRL tags embedded within the Inline XBRL document)

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**SIGNATURE**

Pursuant to the requirements of the Securities Exchange Act of 1934, as amended, the registrant has duly caused this report to be signed on its behalf by the undersigned hereunto duly authorized.

**THERAVANCE BIOPHARMA, INC.**

Date: February 13, 2020

By: /s/ Bradford J. Shafer  
Bradford J. Shafer  
Executive Vice President and General Counsel

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**THERAVANCE BIOPHARMA, INC.**

(a Cayman Islands exempted company)

5,500,000 Ordinary Shares, par value \$0.00001 per share

**UNDERWRITING AGREEMENT**

February 11, 2020

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Morgan Stanley & Co. LLC  
J.P. Morgan Securities LLC  
Cowen and Company, LLC  
As Representatives of the Underwriters listed on Schedule I

c/o Morgan Stanley & Co. LLC  
1585 Broadway  
New York, New York 10036

c/o J.P. Morgan Securities LLC  
383 Madison Avenue  
New York, New York 10179

c/o Cowen and Company, LLC  
599 Lexington Avenue  
New York, New York 10022

Ladies and Gentlemen:

Theravance Biopharma, Inc., a Cayman Islands exempted company (the “**Company**”), proposes to issue and sell to the several Underwriters named in Schedule I hereto (the “**Underwriters**”) 5,500,000 ordinary shares, par value \$0.00001 per share, of the Company (the “**Firm Shares**”). The Company also proposes to issue and sell to the several Underwriters not more than an additional 825,000 ordinary shares, par value \$0.00001 per share, of the Company (the “**Additional Shares**”) if and to the extent that Morgan Stanley & Co. LLC, J.P. Morgan Securities LLC and Cowen and Company, LLC, as representatives (the “**Representatives**”) of the offering, shall have determined to exercise, on behalf of the Underwriters, the right to purchase such ordinary shares granted to the Underwriters in Section 2 hereof. The Firm Shares and the Additional Shares are hereinafter collectively referred to as the “**Shares**.” The ordinary shares, par value \$0.00001 per share, of the Company to be outstanding after giving effect to the sales contemplated hereby are hereinafter referred to as the “**Ordinary Shares**.” The Shares will have attached thereto rights (the “**Rights**”) to acquire preferred shares of Theravance Biopharma, Inc. pursuant to the Rights Agreement by and between Theravance Biopharma, Inc. and Computershare dated as of May 9, 2014, as amended (the “**Rights Agreement**”).

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The Company has filed with the Securities and Exchange Commission (the “**Commission**”) an automatic shelf registration statement on Form S-3 (File No. 333- 235339), including a base prospectus (the “**Base Prospectus**”), covering the offering and sale of certain securities, including the Shares, which automatic shelf registration statement became effective under Rule 462(e) under the Securities Act of 1933, as amended (the “**Securities Act**”). The registration statement as amended to the date of this Agreement, including the information (if any) deemed to be part of the registration statement pursuant to Rule 430B under the Securities Act, is hereinafter referred to as the “**Registration Statement**”; The Basic Prospectus, as supplemented by the prospectus supplement specifically relating to the Shares in the form first used to confirm sales of the Shares (or in the form first made available to the Underwriters by the Company to meet requests of purchasers pursuant to Rule 173 under the Securities Act) is hereinafter referred to as the “**Prospectus**,” and the term “**preliminary prospectus**” means any preliminary form of the Prospectus.

For purposes of this Agreement, “**free writing prospectus**” has the meaning set forth in Rule 405 under the Securities Act, “**Time of Sale Prospectus**” means the preliminary prospectus contained in the Registration Statement at the time of its effectiveness together with the documents and pricing information set forth in Schedule II hereto, and “**broadly available road show**” means a “bona fide electronic road show” as defined in Rule 433(h) (5) under the Securities Act that has been made available without restriction to any person. As used herein, the terms “Registration Statement,” “preliminary prospectus,” “Time of Sale Prospectus” and “Prospectus” shall include the documents, if any, incorporated by reference therein as of the date hereof. The terms “**supplement**,” “**amendment**” and “**amend**” as used herein with respect to the Registration Statement, the Prospectus, the Time of Sale Prospectus or the Prospectus shall include all documents subsequently filed by the Company with the Commission pursuant to the Securities Exchange Act of 1934, as amended (the “**Exchange Act**”), that are deemed to be incorporated by reference therein.

1. *Representations and Warranties.* The Company represents and warrants to and agrees with each of the Underwriters that:

(a) The Registration Statement has become effective; no stop order suspending the effectiveness of the Registration Statement is in effect, and no proceedings for such purpose or pursuant to Section 8A under the Securities Act are pending before or, to the Company’s knowledge, threatened by the Commission. The Registration Statement is an “automatic shelf registration statement” (as defined in Rule 405) and the Shares have been and remain eligible for registration by the Company on such automatic shelf registration statement.

(b) (i) Each document, if any, filed or to be filed pursuant to the Exchange Act and incorporated by reference in the Time of Sale Prospectus or the Prospectus complied or will comply when so filed in all material respects with the Exchange Act and the applicable rules and regulations of the Commission thereunder, (ii) the Registration Statement, when it became effective, did not contain and, as amended or supplemented, if applicable, as of the date of such amendment or supplement, will not contain any untrue statement of a material fact or omit to state a material fact required to be stated therein or necessary to make the statements therein not misleading, (iii) the Registration Statement and the Prospectus comply and, as amended or supplemented, if applicable, when filed, will comply in all material respects with the Securities Act and the applicable rules and regulations of the Commission thereunder, (iv) the Time of Sale Prospectus does not, and at the time of each sale of the Shares in connection with the offering when the Prospectus is not yet available to prospective purchasers and at the Closing Date (as defined in Section 4), the Time of Sale Prospectus, as then amended or supplemented by the Company, if applicable, will not, contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements therein, in the light of the circumstances under which they were made, not misleading, (v) each broadly available road show, if any, when considered together with the Time of Sale Prospectus, does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements therein, in the light of the circumstances under which they were made, not misleading and (vi) the Prospectus as of its date and the Closing Date, does not contain and, as amended or supplemented, if applicable, as of the date of such amendment or supplement, will not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements therein, in the light of the circumstances under which they were made, not misleading, except that the representations and warranties set forth in this paragraph do not apply to statements or omissions in the Registration Statement, the Time of Sale Prospectus or the Prospectus based upon information relating to any Underwriter furnished to the Company in writing by such Underwriter through you expressly for use therein.

(c) The Company is not an “ineligible issuer” in connection with the offering pursuant to Rules 164, 405 and 433 under the Securities Act. Any free writing prospectus that the Company is required to file pursuant to Rule 433(d) under the Securities Act has been filed, or will be, when filed with the Commission in accordance with the requirements of the Securities Act and the applicable rules and regulations of the Commission thereunder. Each free writing prospectus that the Company has filed, or is required to file, pursuant to Rule 433(d) under the Securities Act or that was prepared by or on behalf of or used or referred to by the Company complies or will comply when filed in all material respects with the requirements of the Securities Act and the applicable rules and regulations of the Commission thereunder. Except for the free writing prospectuses, if any, identified in Schedule II hereto, and electronic road shows, if any, each furnished to you before first use, the Company has not prepared, used or referred to, and will not, without your prior consent, prepare, use or refer to, any free writing prospectus.

(d) (i) At the time of filing the Registration Statement, (ii) at the time of the most recent amendment thereto for the purposes of complying with Section 10(a)(3) of the Securities Act (whether such amendment was by post-effective amendment, incorporated report filed pursuant to Section 13 or 15(d) of the Exchange Act or form of prospectus), and (iii) at the time the Company or any person acting on its behalf (within the meaning, for this clause only, of Rule 163(c) under the Securities Act) made any offer relating to the Shares in reliance on the exemption of Rule 163 under the Securities Act, the Company was a “well-known seasoned issuer” as defined in Rule 405 under the Securities Act.

(e) Ernst & Young LLP, which audited the financial statements and supporting schedules included or incorporated by reference in the Registration Statement, the Time of Sale Prospectus or the Prospectus, are independent public accountants as required by the Securities Act, the Exchange Act and the Public Company Accounting Oversight Board.

(f) The financial statements included or incorporated by reference in the Registration Statement, the Time of Sale Prospectus and the Prospectus, together with the related schedules and notes, present fairly the financial position of the Company and its consolidated subsidiaries at the dates indicated and the statement of operations, stockholders' equity and cash flows of the Company and its consolidated subsidiaries for the periods specified; said financial statements have been prepared in conformity with U.S. generally accepted accounting principles ("GAAP") applied on a consistent basis throughout the periods involved. The supporting schedules, if any, present fairly in accordance with GAAP the information required to be stated therein. The selected financial data and the summary financial information included in the Time of Sale Prospectus present fairly the information shown therein and have been compiled on a basis consistent with that of the audited financial statements included therein. Except as included or incorporated by reference therein, no historical or pro forma financial statements or supporting schedules are required to be included or incorporated by reference in the Registration Statement, the Time of Sale Prospectus or the Prospectus under the Securities Act.

(g) Since the respective dates as of which information is given in the Registration Statement, the Time of Sale Prospectus or the Prospectus, except as otherwise stated therein, (i) there has been no material adverse change in the condition, financial or otherwise, or in the earnings, business affairs or business prospects of the Company and its subsidiaries considered as one enterprise, whether or not arising in the ordinary course of business (a "**Material Adverse Effect**"), (ii) there have been no transactions entered into by the Company or any of its subsidiaries, other than those in the ordinary course of business, which are material with respect to the Company and its subsidiaries considered as one enterprise, and (iii) except as described in the Time of Sale Prospectus there has been no dividend or distribution of any kind declared, paid or made by the Company on any class of its share capital.

(h) The Company has been duly incorporated and is validly existing as an exempted company in good standing under the laws of the Cayman Islands and has corporate power and authority to own, lease and operate its properties and to conduct its business as described in the Registration Statement, the Time of Sale Prospectus and the Prospectus, and to enter into and perform its obligations under this Agreement and the Shares; and the Company is duly qualified as a foreign corporation, partnership or limited liability company, as applicable, to transact business and is in good standing in each other jurisdiction in which such qualification is required, whether by reason of the ownership or leasing of property or the conduct of business, except where the failure so to qualify or to be in good standing would not result in a Material Adverse Effect.

(i) Each “significant subsidiary” of the Company (as such term is defined in Rule 1-02 of Regulation S-X) (each, a “**Subsidiary**” and, collectively, the “**Subsidiaries**”) has been duly organized and is validly existing in good standing (or the functional equivalent) under the laws of the jurisdiction of its incorporation or organization, has corporate or similar power and authority to own, lease and operate its properties and to conduct its business as described in the Registration Statement, the Time of Sale Prospectus and the Prospectus and is duly qualified to transact business and is in good standing in each jurisdiction in which such qualification is required, whether by reason of the ownership or leasing of property or the conduct of business, except where the failure to so qualify or to be in good standing would not result in a Material Adverse Effect. Except as otherwise disclosed in the Registration Statement, the Time of Sale Prospectus and the Prospectus, all of the issued and outstanding share capital or capital stock of each Subsidiary has been duly authorized and validly issued, is fully paid and non-assessable and is owned by the Company, directly or through subsidiaries, free and clear of any security interest, mortgage, pledge, lien, encumbrance, claim or equity. None of the outstanding shares of share capital or capital stock of any Subsidiary were issued in violation of the preemptive or similar rights of any securityholder of such Subsidiary. The only subsidiaries of the Company are (i) the subsidiaries set forth in Schedule III hereto and (ii) certain other subsidiaries which, considered in the aggregate as a single subsidiary, do not constitute a “significant subsidiary” as defined in Rule 1-02 of Regulation S-X.

(j) The authorized, issued and outstanding share capital of the Company is as set forth in the Registration Statement, the Time of Sale Prospectus and the Prospectus in the column entitled “Actual” under the caption “Capitalization” (except for subsequent issuances, if any, pursuant to this Agreement, pursuant to reservations, agreements or employee benefit plans referred to in the Registration Statement, the Time of Sale Prospectus and the Prospectus or pursuant to the exercise of convertible securities or options referred to in the Registration Statement, the Time of Sale Prospectus and the Prospectus). The issued and outstanding share capital of the Company has been duly authorized and validly issued and are fully paid and non-assessable; none of the issued and outstanding shares of the Company was issued in violation of the preemptive or other similar rights of any securityholder of the Company

(k) This Agreement has been duly authorized, executed and delivered by the Company.

(l) The Shares have been duly authorized for issuance and sale to the Underwriters pursuant to this Agreement and, when issued and delivered by the Company pursuant to this Agreement against payment of the consideration set forth herein and, with respect to the Ordinary Shares, have been registered on the Company’s register of members, will be validly issued and fully paid and non assessable; and the issuance of the Shares is not subject to the preemptive or other similar rights of any securityholder of the Company. The Shares conform, in all material respects, to all statements relating thereto contained in the Registration Statement, the Time of Sale Prospectus and the Prospectus and such description conforms to the rights set forth in the instruments defining the same. No holder of Shares will be subject to personal liability by reason of being such a holder. The Rights Agreement has been duly authorized, executed and delivered by the Company and constitutes a valid and legally binding agreement of the Company enforceable against the Company in accordance with its terms, except as the enforcement thereof may be limited by bankruptcy, insolvency (including, without limitation, all laws relating to fraudulent transfers), reorganization, moratorium or similar laws affecting enforcement of creditors’ rights generally and except as enforcement thereof is subject to general principles of equity (regardless of whether enforcement is considered in a proceeding in equity or at law); and the Rights have been duly authorized by the Company and, when issued, will be validly issued, and the Series A junior participating preferred shares have been duly authorized by the Company and validly reserved for issuance upon the exercise in accordance with the terms of the Rights Agreement and registered in the Company’s register of members, will be validly issued, fully paid and non-assessable.

(m) Neither the Company nor any of its subsidiaries is (i) in violation of its memorandum and articles of association, charter, by-laws or similar organizational document, (ii) in default in the performance or observance of any obligation, agreement, covenant or condition contained in any contract, indenture, mortgage, deed of trust, loan or credit agreement, note, lease or other agreement or instrument to which the Company or any of its subsidiaries is a party or by which it or any of them may be bound, or to which any of the property or assets of the Company or any of its subsidiaries is subject (collectively, “**Agreements and Instruments**”) except for such defaults that would not reasonably be expected to have a Material Adverse Effect, or (iii) in violation of any law, statute, rule, regulation, judgment, order, writ or decree of any arbitrator, court, governmental body, regulatory body, administrative agency or other authority, body or agency having jurisdiction over the Company or any of its subsidiaries or any of their respective properties, assets or operations (each, a “**Governmental Entity**”), except for such violations that would not, single or in the aggregate, result in a Material Adverse Effect; and the execution, delivery and performance of this Agreement and the consummation of the transactions contemplated herein and in the Registration Statement, the Time of Sale Prospectus and the Prospectus (including the issuance and sale of the Shares and the use of the proceeds from the sale of the Shares as described in the Registration Statement, the Time of Sale Prospectus and the Prospectus under the caption “Use of Proceeds”) and compliance by the Company with its obligations hereunder have been duly authorized by all necessary corporate action and do not and will not, whether with or without the giving of notice or passage of time or both, conflict with or constitute a breach of, or default or Repayment Event (as defined below) under, or result in the creation or imposition of any lien, charge or encumbrance upon any property or assets of the Company or any of its subsidiaries pursuant to, the Agreements and Instruments (except for such conflicts, breaches, defaults or Repayment Events or liens, charges or encumbrances that would not result in a Material Adverse Effect), nor will such action result in any violation of the provisions of the charter, by-laws or similar organizational document of the Company or any of its subsidiaries or any applicable law, statute, rule, regulation, judgment, order, writ or decree of any Governmental Entity. As used herein, a “**Repayment Event**” means any event or condition which gives the holder of any note, debenture or other evidence of indebtedness (or any person acting on such holder’s behalf) the right to require the repurchase, redemption or repayment of all or a portion of such indebtedness by the Company or any of its subsidiaries.

(n) No labor dispute with the employees of the Company or any of its subsidiaries exists or, to the knowledge of the Company, is imminent, and the Company is not aware of any existing or imminent labor disturbance by the employees of any of its or its subsidiaries principal suppliers, manufacturers, customers or contractors, which, in either case, would result in a Material Adverse Effect.

(o) There is no claim, action, suit, proceeding, inquiry or investigation before or brought by any court or governmental agency or body, domestic or foreign, now pending, or, to the knowledge of the Company, threatened, against or affecting the Company or any of its subsidiaries, which is required to be disclosed in the Registration Statement, the Time of Sale Prospectus and the Prospectus, or which would reasonably be expected to result in a Material Adverse Effect, or which would reasonably be expected to materially and adversely affect the performance by the Company of its obligations under this Agreement; the aggregate of all pending legal or governmental proceedings to which the Company or any of its subsidiaries is a party or of which any of their respective property or assets is the subject which are not described in the Registration Statement, the Time of Sale Prospectus and the Prospectus, including ordinary routine litigation incidental to the business, would not reasonably be expected to result in a Material Adverse Effect.

(p) There are no contracts or documents which are required to be described in the Registration Statement, the Time of Sale Prospectus or the Prospectus or the documents incorporated by reference therein or to be filed as exhibits thereto which have not been so described and filed as required.

(q) Neither the Company nor any affiliate of the Company has taken, nor will the Company or any affiliate take, directly or indirectly, any action which is designed to or which has constituted or which would be expected to cause or result in stabilization or manipulation of the price of any security of the Company to facilitate the sale or resale of the Shares. For purposes of this Agreement, the term "affiliate" has the meaning set forth in Rule 405 under the Securities Act.

(r) No filing with, or authorization, approval, consent, license, order, registration, qualification or decree of, any court or governmental authority or agency is necessary or required for the performance by the Company of its obligations hereunder, in connection with the offering, issuance or sale of the Shares hereunder or the consummation of the transactions contemplated by this Agreement, except such as have been already obtained or as may be required under the Securities Act, the rules of The NASDAQ Stock Market LLC, state securities laws or laws and regulations of jurisdictions outside the United States or the rules of The Financial Industry Regulatory Authority, Inc. ("**FINRA**").

(s) The Company and its subsidiaries possess such permits, licenses, approvals, consents and other authorizations (collectively, “**Governmental Licenses**”) issued by the appropriate federal, state, local or foreign regulatory agencies or bodies necessary to conduct the business of the Company as described in the Registration Statement, the Time of Sale Prospectus or the Prospectus, except where the failure so to possess would not, singly or in the aggregate, result in a Material Adverse Effect; the Company and its subsidiaries are in compliance with the terms and conditions of all such Governmental Licenses, except where the failure so to comply would not, singly or in the aggregate, result in a Material Adverse Effect; all of the Governmental Licenses are valid and in full force and effect, except when the invalidity of such Governmental Licenses or the failure of such Governmental Licenses to be in full force and effect would not, singly or in the aggregate, result in a Material Adverse Effect; and neither the Company nor any of its subsidiaries has received any notice of proceedings relating to the revocation or modification of any such Governmental Licenses which, singly or in the aggregate, if the subject of an unfavorable decision, ruling or finding, would result in a Material Adverse Effect.

(t) The Company and its subsidiaries have good and marketable title or have valid rights to lease or otherwise use all real and personal property that is material to the business of the Company, free and clear of all mortgages, pledges, liens, security interests, claims, restrictions or encumbrances of any kind except such as (a) are described in the Registration Statement, the Time of Sale Prospectus or the Prospectus or (b) do not, singly or in the aggregate, materially affect the value of such property and do not materially interfere with the use made and proposed to be made of such property by the Company or its subsidiaries; and all of the leases and subleases material to the business of the Company and its subsidiaries, considered as one enterprise, and under which the Company or its subsidiaries holds properties described in the Registration Statement, the Time of Sale Prospectus or the Prospectus, are in full force and effect, and neither the Company nor any of its subsidiaries has any notice of any material claim of any sort that has been asserted by anyone adverse to the rights of the Company or its subsidiaries under any of the leases or subleases mentioned above.

(u) All United States, Cayman Islands, Irish and other non-U.S., income tax returns (whether federal, state or local) of the Company and its subsidiaries required by law to be filed have been filed and all taxes shown by such tax returns or otherwise assessed, which are due and payable, have been paid, except assessments against which appeals have been or will be promptly taken and as to which adequate reserves have been provided in accordance with GAAP. The United States, Cayman Islands, Irish and other non-U.S., income tax returns (whether federal, state or local) of the Company through the fiscal year ended December 31, 2018 have been filed. While the Company has not received any assessment to date, with respect to the filed returns, it has never been subjected to an audit from a tax authority in any of the jurisdictions in which it operates. The Company and its subsidiaries have filed all other tax returns that are required to have been filed by them pursuant to applicable U.S., Cayman Islands, Irish or other law except insofar as the failure to file such returns would not result in a Material Adverse Effect, and has paid all taxes due pursuant to such returns or pursuant to any assessment received by the Company and its subsidiaries, except for such taxes, if any, as are being contested in good faith and as to which adequate reserves in accordance with GAAP have been established by the Company.

(v) The Company does not expect to be a Passive Foreign Investment Company (“**PFIC**”) within the meaning of Section 1297(a) of the United States Internal Revenue Code of 1986, as amended, for its current taxable year or subsequent taxable years. The Company believes that it was not a PFIC for U.S. federal income tax purposes for its most recent taxable year.

(w) The Company is not required, and upon the issuance and sale of the Shares as herein contemplated and the application of the net proceeds therefrom as described in the Registration Statement, the Time of Sale Prospectus or the Prospectus will not be required, to register as an “investment company” under the Investment Company Act of 1940, as amended (the “**1940 Act**”).

(x) Except as described in the Registration Statement, the Time of Sale Prospectus or the Prospectus and except as would not, singly or in the aggregate, result in a Material Adverse Effect, (A) neither the Company nor any of its subsidiaries is in violation of any federal, state, local or foreign statute, law, rule, regulation, ordinance, code, policy or rule of common law or any judicial or administrative interpretation thereof, including any judicial or administrative order, consent, decree or judgment, relating to pollution or protection of human health, the environment (including, without limitation, ambient air, surface water, groundwater, land surface or subsurface strata) or wildlife, including, without limitation, laws and regulations relating to the release or threatened release of chemicals, pollutants, contaminants, wastes, toxic substances, hazardous substances, petroleum or petroleum products, asbestos-containing materials or mold (collectively, “**Hazardous Materials**”) or to the manufacture, processing, distribution, use, treatment, storage, disposal, transport or handling of Hazardous Materials (collectively, “**Environmental Laws**”), (B) the Company and its subsidiaries have all permits, authorizations and approvals required under any applicable Environmental Laws and are each in compliance with their requirements, (C) there are no pending or, to the knowledge of the Company, threatened administrative, regulatory or judicial actions, suits, demands, demand letters, claims, liens, notices of noncompliance or violation, investigation or proceedings relating to any Environmental Law against the Company or any of its subsidiaries and (D) there are no events or circumstances that would reasonably be expected to form the basis of an order for clean-up or remediation, or an action, suit or proceeding by any private party or governmental body or agency, against or affecting the Company or any of its subsidiaries relating to Hazardous Materials or any Environmental Laws.

(y) Except for such rights as have been satisfied or waived, there are no persons with pre-emptive rights, registration rights or other similar rights to (i) purchase the Shares or (ii) have any securities registered pursuant to the Registration Statement or otherwise registered by the Company under the Securities Act.

(z) Except as set forth or incorporated by reference in the Time of Sale Prospectus, neither the Company nor any of its subsidiaries has violated any provisions of the Employee Retirement Income Security Act of 1974, as amended, except for violations which, singly or in the aggregate, would not result in a Material Adverse Effect.

(aa) The Company and its subsidiaries carry or are entitled to the benefits of insurance, with financially sound and reputable insurers, in such amounts and covering such risks as the Company believes is reasonably prudent, and all such insurance is in full force and effect. The Company has no reason to believe that it or any of its subsidiaries will not be able (A) to renew its existing insurance coverage as and when such policies expire or (B) to obtain comparable coverage from similar institutions as may be necessary or appropriate to conduct its business as now conducted and at a cost that would not result in a Material Adverse Effect.

(bb) The Company and each of its subsidiaries maintain a system of internal control over financial reporting sufficient to provide reasonable assurance that (1) transactions are executed in accordance with management's general or specific authorizations; (2) transactions are recorded as necessary to permit preparation of financial statements in conformity with GAAP and to maintain accountability for assets; (3) access to assets is permitted only in accordance with management's general or specific authorization; and (4) the recorded accountability for assets is compared with the existing assets at reasonable intervals and appropriate action is taken with respect to any differences; and (5) the interactive data in eXtensible Business Reporting Language incorporated by reference in the Registration Statement, the Time of Sale Prospectus and the Prospectus fairly presents the information called for in all material respects and is prepared in accordance with the Commission's rules and guidelines applicable thereto. Since the end of the Company's most recent audited fiscal year, (i) the Company is not aware of any material weakness in the Company's internal control over financial reporting (whether or not remediated) and (ii) there has been no change in the Company's internal control over financial reporting that has materially affected, or is reasonably likely to materially affect, the Company's internal control over financial reporting. The Company and its subsidiaries employ disclosure controls and procedures that are designed to reasonably assure that information required to be disclosed by the Company in the reports that it files or submits under the Exchange Act is recorded, processed, summarized and reported, within the time periods specified in the Commission's rules and forms, and that material information regarding the Company and its subsidiaries is accumulated and communicated to the Company's management, including its principal executive officer or officers and principal financial officer or officers, as appropriate, to allow timely decisions regarding disclosure.

(cc) The Registration Statement is not the subject of a pending proceeding or examination under Section 8(d) or 8(e) of the Securities Act, and the Company is not the subject of a pending proceeding under Section 8A of the Securities Act in connection with the offering of the Shares.

(dd) There is and has been no failure on the part of the Company or any of the Company's directors or officers, in their capacities as such, to comply in all material respects with any provision of the Sarbanes-Oxley Act of 2002 and the rules and regulations promulgated in connection therewith, including Section 402 related to loans and Sections 302 and 906 related to certifications.

(ee) All preclinical studies and clinical trials conducted by or on behalf of the Company that are material to the Company and its subsidiaries, taken as a whole, have been adequately described in the Registration Statement, the Time of Sale Prospectus and the Prospectus in all material respects. The preclinical studies and clinical trials conducted by or on behalf of the Company were and, if still ongoing, are being conducted in material compliance with all laws and regulations applicable thereto in the jurisdictions in which they are being conducted and with all laws and regulations applicable to preclinical studies and clinical trials from which data will be submitted to support marketing approval. The descriptions in the Registration Statement, the Time of Sale Prospectus and the Prospectus of the results of such studies and trials are accurate and complete in all material respects and fairly present the data derived from such studies, and the Company has no knowledge of any large well-controlled clinical trial the aggregate results of which call into question the results of any clinical trial conducted by or on behalf of the Company that are described in the Registration Statement, the Time of Sale Prospectus and the Prospectus or the results of which are referred to in the Registration Statement, the Time of Sale Prospectus and the Prospectus. Except as disclosed in the Registration Statement, the Time of Sale Prospectus and the Prospectus, the Company has not received any notices or statements from the U.S. Food and Drug Administration ("FDA") or any comparable non-U.S. regulatory agency (each a "**Regulatory Authority**") imposing, requiring, requesting or suggesting a clinical hold, termination, suspension or material modification for or of any preclinical studies or clinical trials that are described in the Registration Statement, the Time of Sale Prospectus and the Prospectus or the results of which are referred to in the Registration Statement, the Time of Sale Prospectus and the Prospectus. Except as disclosed in the Registration Statement, the Time of Sale Prospectus and the Prospectus, the Company has not received any notices or statements from any Regulatory Authority, and otherwise has no knowledge of (1) any investigational new drug application for any potential product of the Company is or has been rejected or determined to be non-approvable or conditionally approvable; and (2) any license, approval, permit or authorization to conduct any clinical trial of any potential product of the Company has been, will be or may be suspended, revoked, materially modified or limited.

(ff) The Company and each of its subsidiaries: (1) are and at all times have been in compliance in all material respects with all statutes, rules, or regulations applicable to the ownership, testing, development, manufacture, packaging, processing, use, distribution, marketing, labeling, promotion, sale, offer for sale, storage, import, export or disposal of any product manufactured or distributed by the Company (“**Applicable Laws**”); (2) have not received any FDA Form 483, notice of adverse finding, warning letter, untitled letter or other correspondence or notice from any Regulatory Authority alleging or asserting noncompliance with any Applicable Laws or any licenses, certificates, approvals, clearances, authorizations, permits and supplements or amendments thereto required by any such Applicable Laws (“**Authorizations**”); (3) possess all material Authorizations and such material Authorizations are valid and in full force and effect and are not in violation of any term of any such material Authorizations; (4) have not received notice of any claim, action, suit, proceeding, hearing, enforcement, investigation, arbitration or other action from any governmental authority or third party alleging that any product operation or activity is in violation of any Applicable Laws or Authorizations and, to the knowledge of the Company, no such proceedings are threatened or contemplated by any such governmental authority or third party; (5) have not received notice that any Regulatory Authority has taken, is taking or will take action to limit, suspend, modify or revoke any Authorizations and, to the knowledge of the Company, no such Regulatory Authority has threatened such action; and (6) have filed, obtained, maintained or submitted all material reports, documents, forms, notices, applications, records, claims, submissions and supplements or amendments as required by any Applicable Laws or Authorizations and that all such material reports, documents, forms, notices, applications, records, claims, submissions and supplements or amendments were complete and correct on the date filed (or were corrected or supplemented by a subsequent submission).

(gg) None of the Company, any of its subsidiaries, or any director, officer, or, to the knowledge of the Company, any employee, affiliate or agent or other person acting on behalf of the Company or any of its subsidiaries has taken any action, directly or indirectly, that would result in a violation by such persons of the Foreign Corrupt Practices Act of 1977, as amended, and the rules and regulations thereunder (the “**FCPA**”) and any other applicable anti-corruption laws, including, without limitation, making use of the mails or any means or instrumentality of interstate commerce corruptly in furtherance of an offer, payment, promise to pay or authorization of the payment of any money, or other property, gift, promise to give, or authorization of the giving of anything of value to any “foreign official” (as such term is defined in the FCPA) or any foreign political party or official thereof or any candidate for foreign political office, in contravention of any applicable anti-corruption laws, and the Company and each of its subsidiaries and, to the knowledge of the Company, affiliates have conducted their businesses in compliance with applicable anti-corruption laws and have instituted and maintain policies and procedures designed to ensure, and which are reasonably expected to continue to ensure, continued compliance therewith. Neither the Company nor any of its subsidiaries will use, directly or indirectly, the proceeds of the offering in furtherance of an offer, payment, promise to pay, or authorization of the payment or giving of money, or anything else of value, to any person in violation of any applicable anti-corruption laws.

(hh) The operations of the Company and each of its subsidiaries are and have been conducted at all times in material compliance with all applicable financial recordkeeping and reporting requirements, including those of the Bank Secrecy Act, as amended by Title III of the Uniting and Strengthening America by Providing Appropriate Tools Required to Intercept and Obstruct Terrorism Act of 2001 (USA PATRIOT Act), and the applicable anti-money laundering statutes of all jurisdictions, the rules and regulations thereunder and any related or similar rules, regulations or guidelines, issued, administered or enforced by any Governmental Entity (collectively, the “**Money Laundering Laws**”); and no action, suit or proceeding by or before any Governmental Entity involving the Company or any of its subsidiaries with respect to the Money Laundering Laws is pending or, to the knowledge of the Company, threatened.

(ii) None of the Company, any of its subsidiaries or any director or officer thereof, or to the knowledge of the Company, any employee, agent, affiliate or representative of the Company or any of its subsidiaries is an individual or entity (“**Person**”) that is, or is owned or controlled by one or more Persons that are currently the subject or target of any sanctions administered or enforced by the United States Government, including, without limitation, the U.S. Department of the Treasury’s Office of Foreign Assets Control (“**OFAC**”), the United Nations Security Council (“**UNSC**”), the European Union, Her Majesty’s Treasury (“**HMT**”), or other relevant sanctions authority (collectively, “**Sanctions**”), nor is the Company located, organized or resident in a country or territory that is the subject of Sanctions; and the Company will not directly or indirectly use the proceeds of the sale of the Shares, or lend, contribute or otherwise make available such proceeds to any subsidiaries, joint venture partners or other Person, to fund or facilitate any activities of or business with any Person, or in any country or territory, that, at the time of such funding or facilitation, is the subject of Sanctions or in any other manner that will result in a violation by any Person (including any Person participating in the transaction, whether as underwriter, advisor, investor or otherwise) of Sanctions. For the past five years, the Company and each of its subsidiaries have not knowingly engaged in, are not now knowingly engaged in, and will not knowingly engage in, any dealings or transactions with any Person, or in any country or territory, that at the time of the dealing or transaction is or was the subject of Sanctions.

(jj) Except as disclosed in the Registration Statement, the Time of Sale Prospectus or the Prospectus, the Company (i) does not have any material lending or other relationship with any bank or lending affiliate of any Underwriter and (ii) does not intend to use any of the proceeds from the sale of the Shares to repay any outstanding debt owed to any affiliate of any Underwriter.

(kk) Any statistical and market-related data included in the Registration Statement, the Time of Sale Prospectus or the Prospectus are based on or derived from sources that the Company reasonably believes to be reliable and accurate and, to the extent required, the Company has obtained the written consent to the use of such data from such sources.

(ll) The Company has no debt securities or preferred stock that is rated by any “nationally recognized statistical rating agency” (as that term is defined in Section 3(a)(62) of the Exchange Act).

(mm) The choice of laws of the State of New York as the governing law of this Agreement is a valid choice of law under the laws of the Cayman Islands that will be honored by courts in the Cayman Islands. The Company has the power to submit, and pursuant to Section 15 of this Agreement, has legally, validly, effectively and irrevocably submitted, to the non-exclusive personal jurisdiction of the Specified Courts (as defined in Section 15 of this Agreement), and the Company has the power to designate, appoint and authorize, and pursuant to Section 15 of this Agreement, has legally, validly, effectively and irrevocably designated, appointed an authorized agent for service of process in any action arising out of or relating to this Agreement or the Shares in any Specified Court, and service of process effected on such authorized agent will be effective to confer valid personal jurisdiction over the Company as provided in Section 15 hereof.

(nn) Any final judgment for a fixed sum of money rendered by a Specified Court having jurisdiction under its own domestic laws in respect of any suit, action or proceeding against the Company based upon this Agreement and the Shares would be recognized and enforced against the Company by Cayman Islands courts without re-examining the merits of the case under the common law doctrine of obligation; provided that (i) adequate service of process has been effected and the defendant has had a reasonable opportunity to be heard, (ii) such judgments or the enforcement thereof are not contrary to the law, public policy, security or sovereignty of the Cayman Islands, (iii) such judgments were not obtained by fraudulent means and do not conflict with any other valid judgment in the same matter between the same parties, and (iv) an action between the same parties in the same matter is not pending in any Cayman Islands court at the time the lawsuit is instituted in the foreign court; it is not necessary that this Agreement, the Prospectus or any other document be filed or recorded with any court or other authority in the Cayman Islands.

(oo) Except as disclosed in the Time of Sale Prospectus and the Prospectus, no transaction stamp or other issuance, transfer or withholding taxes or duties are payable by or on behalf of each Underwriter to the government of the Cayman Islands, Ireland or any political subdivision or taxing authority thereof or therein in connection with (i) the issuance of the Shares, (ii) the sale and delivery by the Company of the Shares to or for the account of each Underwriter, (iii) the initial resale sale and delivery by each Underwriter of the Shares to purchasers thereof or (iv) the execution, delivery and performance of this Agreement or any other document contemplated hereby; provided, that, this Agreement is not executed in, or after execution, brought within the jurisdiction of the Cayman Islands. The Company confirms it has not executed this Agreement in, nor will it, after execution, bring this Agreement within, the jurisdiction of the Cayman Islands.

(pp) Except as disclosed in the Time of Sale Prospectus and the Prospectus, no regulatory approvals are currently required in the Cayman Islands in order for the Company to pay dividends or other distributions declared by the Company to the holders of Shares. Under current laws and regulations of the Cayman Islands and any political subdivision thereof, any amount payable with respect to the Shares upon liquidation of the Company or upon redemption thereof and dividends and other distributions declared and payable on the share capital of the Company may be paid by the Company in United States dollars and freely transferred out of the Cayman Islands, and no such payments made to the holders thereof or therein who are non-residents of the Cayman Islands will be subject to income, withholding or other taxes under laws and regulations of the Cayman Islands or any political subdivision or taxing authority thereof or therein and without the necessity of obtaining any governmental authorization in the Cayman Islands or any political subdivision or taxing authority thereof or therein.

(qq) It is not necessary under the laws of the Cayman Islands (i) to enable the Underwriters to enforce their rights under this Agreement, *provided* that they are not otherwise engaged in business in the Cayman Islands, or (ii) solely by reason of the execution, delivery or consummation of this Agreement, for any of the Underwriters to be qualified or entitled to carry out business in the Cayman Islands.

(rr) This Agreement is in proper form under the laws of the Cayman Islands for the enforcement thereof against the Company, and to ensure the legality, validity, enforceability or admissibility into evidence in Cayman Islands of this Agreement.

(ss) Neither the Company nor any of its subsidiaries nor any of its or their properties or assets has any immunity from the jurisdiction of any court or from any legal process (whether through service or notice, attachment prior to judgment, attachment in aid of execution or otherwise) under the laws of the Cayman Islands. The irrevocable and unconditional waiver and agreement of the Company contained in Section 15 not to plead or claim any such immunity in any legal action, suit or proceeding based on this Agreement is valid and binding under the laws of the Cayman Islands.

(tt) Except as would not, individually or in the aggregate, reasonably be expected to have a Material Adverse Effect on the Company and its subsidiaries, taken as a whole, (i) the Company and its subsidiaries own or have the valid and enforceable right to use all patents, inventions, copyrights, licenses, know how (including trade secrets and other unpatented and/or unpatentable proprietary or confidential information, systems or procedures), trademarks, service marks, trade names, domain names and all other similar intellectual property and proprietary rights (including all registrations and applications for registration of, and all goodwill associated with, the foregoing) (collectively, “**Intellectual Property Rights**”) used in or reasonably necessary to the conduct of their businesses and as proposed to be conducted; (ii) all Intellectual Property Rights owned by the Company and its subsidiaries and, to the Company’s knowledge, all Intellectual Property Rights licensed to the Company and its subsidiaries, are valid, subsisting and enforceable, and there is no pending or, to the Company’s knowledge, threatened action, suit, proceeding or claim by others challenging the ownership, inventorship, validity, scope or enforceability of any such Intellectual Property Rights; (iii) neither the Company nor any of its subsidiaries has received any notice alleging any infringement, misappropriation or other violation of Intellectual Property Rights; (iv) to the Company’s knowledge, no third party is infringing, misappropriating or otherwise violating, or has infringed, misappropriated or otherwise violated, any Intellectual Property Rights owned by or exclusively licensed to the Company; (v) neither the Company nor any of its subsidiaries nor the conduct of their respective businesses infringes, misappropriates or otherwise violates, or has infringed, misappropriated or otherwise violated, any Intellectual Property Rights; (vi) none of the product candidates of the Company or any of its subsidiaries, if commercially sold or offered for commercial sale, would infringe, misappropriate or otherwise violate any Intellectual Property Rights of any third party; (vii) all employees or contractors engaged in the development of Intellectual Property Rights on behalf of the Company or any subsidiary of the Company have executed an invention assignment agreement whereby such employees or contractors presently assign all of their right, title and interest in and to such Intellectual Property Rights to the Company or the applicable subsidiary, and to the Company’s knowledge, no such agreement has been breached or violated; and (viii) the Company and its subsidiaries use, and have used, commercially reasonable efforts in accordance with normal industry practice to maintain the confidentiality of all Intellectual Property Rights, the value of which to the Company or any of its subsidiaries is contingent upon maintaining the confidentiality thereof.

(uu) (i) The Company and each of its subsidiaries have complied and are presently in compliance in all material respects with all internal and external privacy policies, contractual obligations, industry standards, applicable laws, statutes, judgments, orders, rules and regulations of any court or arbitrator or other governmental or regulatory authority and any other legal obligations, in each case, relating to the collection, use, transfer, import, export, storage, protection, disposal and disclosure by the Company or any of its subsidiaries of data (including all personal, personally identifiable, household, sensitive, confidential or regulated data) (such obligations, “**Data Security Obligations**”, and such data, “**Data**”); (ii) neither the Company nor any of its subsidiaries has received any written notification of or complaint regarding, and are unaware of any other facts that, individually or in the aggregate, would reasonably indicate non-compliance with any Data Security Obligation; and (iii) there is no action, suit or proceeding by or before any court or governmental agency, authority or body, pending or, to the Company’s knowledge, threatened, alleging non-compliance with any Data Security Obligation. The Company and its subsidiaries have at all times taken steps reasonably necessary in accordance with industry standard practices (including, without limitation, implementing and monitoring compliance with adequate measures with respect to technical and physical security) to protect such information against loss and against unauthorized access, use, modification, disclosure or other misuse, except in each case to the extent that the failure to do so would not reasonably be expected to have a Material Adverse Effect on the Company and its subsidiaries, taken as a whole. To the knowledge of the Company, except as disclosed in the Registration Statement, the Time of Sale Prospectus or the Prospectus or as would not individually or in the aggregate have a Material Adverse Effect on the Company and its subsidiaries, taken as a whole, there has been no unauthorized access to such information.

(vv) The Company and its subsidiaries' information technology assets and equipment, computers, systems, networks, hardware, software, websites, applications, and databases (including the data of their respective customers, employees, suppliers, vendors and any third party data maintained by or on behalf of the Company and its subsidiaries) (collectively, "IT Systems") are adequate for, and operate and perform in all material respects as required in connection with the operation of the business of the Company and its subsidiaries, free and clear of all material bugs, errors, defects, Trojan horses, time bombs, malware and other corruptants. The Company and each of its subsidiaries have implemented and maintained all technical and organizational measures, controls, policies, procedures, and safeguards necessary to protect the IT Systems and Data used in connection with the operation of the Company's and its subsidiaries' businesses. Without limiting the foregoing, the Company and its subsidiaries have used commercially reasonable efforts to establish and maintain, and have established, maintained, implemented and complied with, reasonable information technology, information security, cyber security and data protection controls, policies and procedures, including oversight, access controls, encryption, technological and physical safeguards and business continuity/disaster recovery and security plans that are designed to protect against and prevent breach, destruction, loss, unauthorized distribution, use, access, disablement, misappropriation or modification, or other compromise or misuse of or relating to any information technology system or Data used in connection with the operation of the Company's and its subsidiaries' businesses ("**Breach**"). To the knowledge of the Company, there has been no such Breach, and the Company and its subsidiaries have not been notified of and have no knowledge of any event or condition that would reasonably be expected to result in, any such Breach.

(ww) The Company (i) has not alone engaged in any Testing-the-Waters Communication with any person other than Testing-the-Waters Communications with the consent of the Representatives with entities that are reasonably believed to be qualified institutional buyers within the meaning of Rule 144A under the Securities Act or institutions that are reasonably believed to be accredited investors within the meaning of Rule 501 under the Securities Act and (ii) has not authorized anyone other than the Representatives to engage in Testing-the-Waters Communications. The Company reconfirms that the Representatives has been authorized to act on its behalf in undertaking Testing-the-Waters Communications. The Company has not distributed any Testing-the-Waters Communication that is a written communication within the meaning of Rule 405 under the Securities Act. "**Testing-the-Waters Communication**" means any communication with potential investors undertaken in reliance on Section 5(d) or Rule 163B of the Securities Act.

(xx) As of the time of each sale of the Shares in connection with the offering when the Prospectus is not yet available to prospective purchasers, none of (A) the Time of Sale Prospectus, (B) any free writing prospectus, when considered together with the Time of Sale Prospectus, and (C) any individual Testing-the-Waters Communication, when considered together with the Time of Sale Prospectus, included, includes or will include an untrue statement of a material fact or omitted, omits or will omit to state a material fact necessary in order to make the statements therein, in the light of the circumstances under which they were made, not misleading.

Any certificate signed by any officer of the Company or any of its subsidiaries delivered to the Representatives or to counsel for the Underwriters shall be deemed a representation and warranty by the Company to each Underwriter as to the matters covered thereby.

The Company acknowledges that the Underwriters and, for purposes of the opinions to be delivered pursuant to Section 5 hereof, counsel to the Company and counsel to the Underwriters, will rely upon the accuracy and truthfulness of the foregoing representations and hereby consents to such reliance.

2. *Agreements to Sell and Purchase.* The Company hereby agrees to sell to the several Underwriters, and each Underwriter, upon the basis of the representations and warranties herein contained, but subject to the terms and conditions hereinafter stated, agrees, severally and not jointly, to purchase from the Company the respective numbers of Firm Shares set forth in Schedule I hereto opposite its name at \$25.38 a share (the “**Purchase Price**”).

On the basis of the representations and warranties contained in this Agreement, and subject to its terms and conditions, the Company agrees to sell to the Underwriters the Additional Shares, and the Underwriters shall have the right to purchase, severally and not jointly, up to 825,000 Additional Shares at the Purchase Price, provided, however, that the amount paid by the Underwriters for any Additional Shares shall be reduced by an amount per share equal to any dividends declared by the Company and payable on the Firm Shares but not payable on such Additional Shares. You may exercise this right on behalf of the Underwriters in whole or from time to time in part by giving written notice not later than 30 days after the date of this Agreement. Any exercise notice shall specify the number of Additional Shares to be purchased by the Underwriters and the date on which such shares are to be purchased. Each purchase date must be at least one business day after the written notice is given and may not be earlier than the closing date for the Firm Shares or later than ten business days after the date of such notice. Additional Shares may be purchased as provided in Section 4 hereof solely for the purpose of covering sales of shares in excess of the number of the Firm Shares. On each day, if any, that Additional Shares are to be purchased (an “**Option Closing Date**”), each Underwriter agrees, severally and not jointly, to purchase the number of Additional Shares (subject to such adjustments to eliminate fractional shares as you may determine) that bears the same proportion to the total number of Additional Shares to be purchased on such Option Closing Date as the number of Firm Shares set forth in Schedule I hereto opposite the name of such Underwriter bears to the total number of Firm Shares.

3. *Terms of Public Offering.* The Company is advised by you that the Underwriters propose to make a public offering of their respective portions of the Shares as soon after the Registration Statement and this Agreement have become effective as in your judgment is advisable. The Company is further advised by you that the Shares are to be offered to the public initially at \$27.00 a share (the “**Public Offering Price**”) and to certain dealers selected by you at a price that represents a concession not in excess of \$0.9720 a share under the Public Offering Price.

4. *Payment and Delivery.* Payment for the Firm Shares shall be made to the Company in Federal or other funds immediately available in New York City against delivery of such Firm Shares for the respective accounts of the several Underwriters at 10:00 a.m., New York City time, on February 14, 2020, or at such other time on the same or such other date, not later than February 21, 2020, as shall be designated in writing by you. The time and date of such payment are hereinafter referred to as the “**Closing Date.**”

Payment for any Additional Shares shall be made to the Company in Federal or other funds immediately available in New York City against delivery of such Additional Shares for the respective accounts of the several Underwriters at 10:00 a.m., New York City time, on the date specified in the corresponding notice described in Section 2 or at such other time on the same or on such other date, in any event not later than March 26, 2020, as shall be designated in writing by you.

The Firm Shares and Additional Shares shall be registered in such names and in such denominations as you shall request not later than one full business day prior to the Closing Date or the applicable Option Closing Date, as the case may be. The Firm Shares and Additional Shares shall be delivered to you on the Closing Date or an Option Closing Date, as the case may be, for the respective accounts of the several Underwriters, with any transfer taxes payable in connection with the transfer of the Shares to the Underwriters duly paid, against payment of the Purchase Price therefor.

Delivery of the Securities shall be effected by updating the register of members of the Company to reflect the issuance of such Securities.

5. *Conditions to the Underwriters’ Obligations.* The several obligations of the Underwriters are subject to the following further conditions:

(a) Subsequent to the execution and delivery of this Agreement and prior to the Closing Date:

(i) no order suspending the effectiveness of the Registration Statement shall be in effect, and no proceeding for such purpose or pursuant to Section 8A under the Securities Act shall be pending before or threatened by the Commission; and

(ii) there shall not have occurred any change, or any development involving a prospective change, in the condition, financial or otherwise, or in the earnings, business or operations of the Company and its subsidiaries, taken as a whole, from that set forth in the Time of Sale Prospectus that, in your judgment, is material and adverse and that makes it, in your judgment, impracticable to market the Shares on the terms and in the manner contemplated in the Time of Sale Prospectus.

(b) The Representatives shall have received on the Closing Date a certificate, dated the Closing Date and signed by an executive officer of the Company, to the effect set forth in Section 5(a)(i) above and to the effect that the representations and warranties of the Company contained in this Agreement are true and correct as of the Closing Date and that the Company has complied with all of the agreements and satisfied all of the conditions on its part to be performed or satisfied hereunder on or before the Closing Date. The officer signing and delivering such certificate may rely upon his or her knowledge as to proceedings threatened.

(c) The Representatives shall have received on the Closing Date an opinion and negative assurance letter of Gunderson Dettmer Stough Villeneuve Franklin & Hachigian, LLP, outside counsel for the Company, dated the Closing Date, in form and substance satisfactory to the Representatives.

(d) The Representatives shall have received on the Closing Date an opinion of Maples and Calder, Cayman Islands counsel for the Company, dated the Closing Date, in form and substance satisfactory to the Representatives.

(e) The Representatives shall have received on the Closing Date an opinion and negative assurance letter of Davis Polk & Wardwell LLP, counsel for the Underwriters, dated the Closing Date, in form and substance satisfactory to the Representatives.

The opinions of counsel for the Company described in Section 5(c) and 5(d) above shall be rendered to the Representatives at the request of the Company and shall so state therein.

(f) The Representatives shall have received, on each of the date hereof and the Closing Date, a letter dated the date hereof or the Closing Date, as the case may be, in form and substance satisfactory to the Representatives, from Ernst & Young LLP, independent public accountants, containing statements and information of the type ordinarily included in accountants' "comfort letters" to underwriters with respect to the financial statements and certain financial information contained or incorporated by reference in the Registration Statement, the Time of Sale Prospectus and the Prospectus; *provided* that the letter delivered on the Closing Date shall use a "cut-off date" not earlier than the date hereof.

(g) The Representatives shall have received on each of the date hereof and the Closing Date, a certificate dated as of the date hereof and as of the Closing Date, respectively, from the Chief Financial Officer of the Company, in form and substance satisfactory to the Representatives.

(h) The "lock-up" agreements, each substantially in the form of Exhibit A hereto, between you and certain shareholders, officers and directors of the Company relating to restrictions on sales and certain other dispositions of Ordinary Shares or certain other securities, delivered to you on or before the date hereof, shall be in full force and effect on the Closing Date.

(i) The several obligations of the Underwriters to purchase Additional Shares hereunder are subject to the delivery to you on the applicable Option Closing Date of the following:

(i) a certificate, dated the Option Closing Date and signed by an executive officer of the Company, confirming that the certificate delivered on the Closing Date pursuant to Section 5(b) hereof remains true and correct as of such Option Closing Date;

(ii) an opinion and negative assurance letter of Gunderson Dettmer Stough Villeneuve Franklin & Hachigian, LLP, outside counsel for the Company, dated the Option Closing Date, relating to the Additional Shares to be purchased on such Option Closing Date and otherwise to the same effect as the opinion required by Section 5(c) hereof;

(iii) an opinion of Maples and Calder, Cayman Islands counsel for the Company, dated the Option Closing Date, relating to the Additional Shares to be purchased on such Option Closing Date and otherwise to the same effect as the opinion required by Section 5(d) hereof;

(iv) an opinion and negative assurance letter of Davis Polk & Wardwell LLP, counsel for the Underwriters, dated the Option Closing Date, relating to the Additional Shares to be purchased on such Option Closing Date and otherwise to the same effect as the opinion required by Section 5(e) hereof;

(v) a letter dated the Option Closing Date, in form and substance satisfactory to the Representatives, from Ernst & Young LLP, independent public accountants, substantially in the same form and substance as the letter furnished to the Underwriters pursuant to Section 5(f) hereof; *provided* that the letter delivered on the Option Closing Date shall use a “cut-off date” not earlier than two business days prior to such Option Closing Date;

(vi) a certificate from the Chief Financial Officer of the Company, dated the Option Closing Date, to the same effect as the certificate required by Section 5(g) hereof; and

(vii) such other documents as you may reasonably request with respect to the good standing of the Company, the due authorization and issuance of the Additional Shares to be sold on such Option Closing Date and other matters related to the issuance of such Additional Shares.

6. *Covenants of the Company.* The Company covenants with each Underwriter as follows:

(a) To furnish to you, without charge, seven signed copies of the Registration Statement (including exhibits thereto) and for delivery to each other Underwriter a conformed copy of the Registration Statement (without exhibits thereto) and to furnish to you in New York City, without charge, prior to 10:00 a.m. New York City time on the business day next succeeding the date of this Agreement and during the period mentioned in Section 6(e) or 6(f) below, as many copies of the Time of Sale Prospectus, the Prospectus, and any supplements and amendments thereto or to the Registration Statement as you may reasonably request.

(b) Before amending or supplementing the Registration Statement, the Time of Sale Prospectus or the Prospectus, to furnish to you a copy of each such proposed amendment or supplement and not to file any such proposed amendment or supplement to which you reasonably object and to file with the Commission within the applicable period specified in Rule 424(b) under the Securities Act any prospectus required to be filed pursuant to such Rule.

(c) To furnish to you a copy of each proposed free writing prospectus to be prepared by or on behalf of, used by, or referred to by the Company and not to use or refer to any such proposed free writing prospectus to which you reasonably object.

(d) Not to take any action that would result in an Underwriter or the Company being required to file with the Commission pursuant to Rule 433(d) under the Securities Act a free writing prospectus prepared by or on behalf of the Underwriter that the Underwriter otherwise would not have been required to file thereunder.

(e) If the Time of Sale Prospectus is being used to solicit offers to buy the Shares at a time when the Prospectus is not yet available to prospective purchasers and any event shall occur or condition exist as a result of which it is necessary to amend or supplement the Time of Sale Prospectus in order to make the statements therein, in the light of the circumstances, not misleading, or if any event shall occur or condition exist as a result of which the Time of Sale Prospectus conflicts with the information contained in the Registration Statement then on file, or if, in the opinion of counsel for the Underwriters, it is necessary to amend or supplement the Time of Sale Prospectus to comply with applicable law, forthwith to prepare, file with the Commission and furnish, at its own expense, to the Underwriters and to any dealer upon request, either amendments or supplements to the Time of Sale Prospectus so that the statements in the Time of Sale Prospectus as so amended or supplemented will not, in the light of the circumstances when the Time of Sale Prospectus is delivered to a prospective purchaser, be misleading or so that the Time of Sale Prospectus, as amended or supplemented, will no longer conflict with the Registration Statement, or so that the Time of Sale Prospectus, as amended or supplemented, will comply with applicable law.

(f) If, during such period after the first date of the public offering of the Shares as in the opinion of counsel for the Underwriters the Prospectus (or in lieu thereof the notice referred to in Rule 173(a) of the Securities Act) is required by law to be delivered in connection with sales by an Underwriter or dealer, any event shall occur or condition exist as a result of which it is necessary to amend or supplement the Prospectus in order to make the statements therein, in the light of the circumstances when the Prospectus (or in lieu thereof the notice referred to in Rule 173(a) of the Securities Act) is delivered to a purchaser, not misleading, or if, in the opinion of counsel for the Underwriters, it is necessary to amend or supplement the Prospectus to comply with applicable law, forthwith to prepare, file with the Commission and furnish, at its own expense, to the Underwriters and to the dealers (whose names and addresses you will furnish to the Company) to which Shares may have been sold by you on behalf of the Underwriters and to any other dealers upon request, either amendments or supplements to the Prospectus so that the statements in the Prospectus as so amended or supplemented will not, in the light of the circumstances when the Prospectus (or in lieu thereof the notice referred to in Rule 173(a) of the Securities Act) is delivered to a purchaser, be misleading or so that the Prospectus, as amended or supplemented, will comply with applicable law.

(g) To endeavor to qualify the Shares for offer and sale under the securities or Blue Sky laws of such jurisdictions as you shall reasonably request; *provided* that in no event shall the Company be obligated to qualify to do business in any jurisdiction where it is not now so qualified or to take any action that would subject it to service of process in suits, other than those arising out of the offering or sale of the Shares, or taxation in any jurisdiction where it is not now so subject.

(h) To make generally available to the Company's security holders and to you as soon as practicable an earnings statement covering a period of at least twelve months beginning with the first fiscal quarter of the Company occurring after the date of this Agreement which shall satisfy the provisions of Section 11(a) of the Securities Act and the rules and regulations of the Commission thereunder.

(i) Whether or not the transactions contemplated in this Agreement are consummated or this Agreement is terminated, to pay or cause to be paid all expenses incident to the performance of its obligations under this Agreement, including: (i) the fees, disbursements and expenses of the Company's counsel and the Company's accountants in connection with the registration and delivery of the Shares under the Securities Act and all other fees or expenses in connection with the preparation and filing of the Registration Statement, any preliminary prospectus, the Time of Sale Prospectus, the Prospectus, any free writing prospectus prepared by or on behalf of, used by, or referred to by the Company and amendments and supplements to any of the foregoing, including all printing costs associated therewith, and the mailing and delivering of copies thereof to the Underwriters and dealers, in the quantities hereinabove specified, (ii) all costs and expenses related to the transfer and delivery of the Shares to the Underwriters, including any transfer or other taxes payable thereon, (iii) the reasonable cost of printing or producing any Blue Sky or Legal Investment memorandum in connection with the offer and sale of the Shares under state securities laws and all expenses in connection with the qualification of the Shares for offer and sale under state securities laws as provided in Section 6(g) hereof, including filing fees and the reasonable fees and disbursements of counsel for the Underwriters in connection with such qualification and in connection with the Blue Sky or Legal Investment memorandum (up to a maximum amount of \$40,000 when taken together with clause (iv)), (iv) all filing fees and the reasonable fees and disbursements of counsel to the Underwriters incurred in connection with the review and qualification of the offering of the Shares by the Financial Industry Regulatory Authority, (v) all costs and expenses incident to listing the Shares on The NASDAQ Global Market, (vi) the cost of printing certificates representing the Shares, (vii) the costs and charges of any transfer agent, registrar or depository, (viii) the costs and expenses of the Company relating to investor presentations on any "road show" undertaken in connection with the marketing of the offering of the Shares, including, without limitation, expenses associated with the preparation or dissemination of any electronic road show, expenses associated with the production of road show slides and graphics, fees and expenses of any consultants engaged in connection with the road show presentations with the prior approval of the Company, travel and lodging expenses of the representatives and officers of the Company and any such consultants, and the cost of any aircraft chartered in connection with the road show, (ix) the document production charges and expenses associated with printing this Agreement and (x) all other costs and expenses incident to the performance of the obligations of the Company hereunder for which provision is not otherwise made in this Section. It is understood, however, that except as provided in this Section, Section 8 entitled "Indemnity and Contribution" and the last paragraph of Section 10 below, the Underwriters will pay all of their costs and expenses, including fees and disbursements of their counsel, stock transfer taxes payable on resale of any of the Shares by them and any advertising expenses connected with any offers they may make.

(j) If at any time following the distribution of any Testing-the-Waters Communication that is a written communication within the meaning of Rule 405 under the Securities Act there occurred or occurs an event or development as a result of which such Testing-the-Waters Communication included or would include an untrue statement of a material fact or omitted or would omit to state a material fact necessary in order to make the statements therein, in the light of the circumstances existing at that subsequent time, not misleading, the Company will promptly notify you and will promptly amend or supplement, at its own expense, such Testing-the-Waters Communication to eliminate or correct such untrue statement or omission.

(k) The Company will deliver to each Underwriter (or its agent), on the date of execution of this Agreement, a properly completed and executed Certification Regarding Beneficial Owners of Legal Entity Customers, together with copies of identifying documentation, and the Company undertakes to provide such additional supporting documentation as each Underwriter may reasonably request in connection with the verification of the foregoing Certification.

(l) The Company shall pay, and shall indemnify and hold the Underwriters harmless against, any stamp, issue, registration, documentary, sales, transfer income, capital gains or other similar taxes or duties imposed under the laws of Cayman Islands or any political sub-division or taxing authority thereof or therein that is payable in connection with (i) the execution, delivery, consummation or enforcement of this Agreement, (ii) the creation, allotment and issuance of the Shares, (iii) the sale and delivery of the Shares to the Underwriters or purchasers procured by the Underwriters, or (iv) the resale and delivery of the Shares by the Underwriters in the manner contemplated herein.

(m) All sums payable by the Company under this Agreement shall be paid free and clear of and without deductions or withholdings of any present or future taxes or duties, unless the deduction or withholding is required by law, in which case the Company shall pay such additional amount as will result in the receipt by each Underwriter of the full amount that would have been received had no deduction or withholding been made.

(n) All sums payable to an Underwriter shall be considered exclusive of any value added or similar taxes. Where the Company is obliged to pay value added or similar tax on any amount payable hereunder to an Underwriter, the Company shall in addition to the sum payable hereunder pay an amount equal to any applicable value added or similar tax.

The Company also covenants with each Underwriter that, without the prior written consent of Morgan Stanley & Co. LLC and J.P. Morgan Securities LLC on behalf of the Underwriters, it will not, and will not publicly disclose an intention to, during the period ending 90 days after the date of the Prospectus (the "**Restricted Period**"), (1) offer, pledge, sell, contract to sell, sell any option or contract to purchase, purchase any option or contract to sell, grant any option, right or warrant to purchase, lend, or otherwise transfer or dispose of, directly or indirectly, any Ordinary Shares or any securities convertible into or exercisable or exchangeable for Ordinary Shares or (2) enter into any swap or other arrangement that transfers to another, in whole or in part, any of the economic consequences of ownership of the Ordinary Shares, whether any such transaction described in clause (1) or (2) above is to be settled by delivery of Ordinary Shares or such other securities, in cash or otherwise or (3) file or confidentially submit any registration statement with the Commission relating to the offering of Ordinary Shares or any securities convertible into or exercisable or exchangeable for Ordinary Shares, other than registration statement on Form S-8. The restrictions contained in the foregoing sentence shall not apply to (A) the Shares to be sold hereunder, (B) any Ordinary Shares issued pursuant to outstanding options, restricted share units ("**RSUs**") or other rights under the Company's existing equity incentive plans, in each case as described in the Registration Statement, the Time of Sale Prospectus and the Prospectus, (C) any options to purchase Ordinary Shares, restricted share awards or RSUs granted under the Company's equity incentive plans, in each case as described in the Registration Statement, the Time of Sale Prospectus and the Prospectus or as may be subsequently amended or adopted; provided that such options, restricted share awards or RSUs shall not vest or become exercisable prior to the expiration of the lock-up period as described in Exhibit A hereto, (D) any Ordinary Shares issued by the Company upon the exercise of any other option or warrant, settlement of an RSU or the conversion of a security outstanding on the date hereof and referred to in the Registration Statement, the Time of Sale Prospectus and the Prospectus, (E) any Ordinary Shares issued by the Company pursuant to the Company's Employee Share Purchase Plan as described in the Registration Statement, the Time of Sale Prospectus and the Prospectus, or (F) any Ordinary Shares or other securities convertible into or exercisable or exchangeable for Ordinary Shares issued in connection with any joint venture, marketing or distribution arrangement, collaboration agreement, intellectual property license agreement, co-development agreement, acquisition by the Company or any of its subsidiaries of any business, property or other assets (whether by means of a merger, stock purchase, asset purchase or otherwise) or other strategic transaction, provided that (x) the aggregate number of Ordinary Shares (on an as-converted, as-exercised and as-exchanged basis) that the Company may issue or sell or agree to issue or sell pursuant to this clause (F) shall not exceed 5% of the total number of outstanding Ordinary Shares immediately following the completion of the transactions contemplated by this Agreement, (y) the recipient of any such Ordinary Shares or other securities issued or sold pursuant to this clause (F) during the 90-day restricted period described above shall enter into an agreement substantially in the form of Exhibit A hereto and (z) the Company shall enter stop transfer instructions with the Company's transfer agent and registrar with respect to such Ordinary Shares and other securities, which the Company agrees it will not waive or amend without the prior written consent of the Representatives.

7. *Covenants of the Underwriters.* Each Underwriter, severally and not jointly, covenants with the Company not to take any action that would result in the Company being required to file with the Commission under Rule 433(d) a free writing prospectus prepared by or on behalf of such Underwriter that otherwise would not be required to be filed by the Company thereunder, but for the action of the Underwriter.

8. *Indemnity and Contribution.* (a) The Company agrees to indemnify and hold harmless each Underwriter, each person, if any, who controls any Underwriter within the meaning of either Section 15 of the Securities Act or Section 20 of the Exchange Act and each affiliate of any Underwriter within the meaning of Rule 405 under the Securities Act from and against any and all losses, claims, damages and liabilities (including, without limitation, any legal or other expenses reasonably incurred in connection with defending or investigating any such action or claim) that arise out of, or are based upon, any untrue statement or alleged untrue statement of a material fact contained in the Registration Statement or any amendment thereof, any preliminary prospectus, the Time of Sale Prospectus or any amendment or supplement thereto, any issuer free writing prospectus as defined in Rule 433(h) under the Securities Act, any Company information that the Company has filed, or is required to file, pursuant to Rule 433(d) under the Securities Act, any “road show” as defined in Rule 433(h) under the Securities Act (a “road show”), the Prospectus or any amendment or supplement thereto, or any Testing-the-Waters Communication, or arise out of, or are based upon, any omission or alleged omission to state therein a material fact required to be stated therein or necessary to make the statements therein not misleading, except insofar as such losses, claims, damages or liabilities arise out of, or are based upon, any such untrue statement or omission or alleged untrue statement or omission made in reliance upon and in conformity with any information relating to any Underwriter furnished to the Company in writing by such Underwriter through you expressly for use therein, it being understood and agreed that the only such information furnished by the Underwriters through you consists of the information described as such in paragraph (b) below.

(b) Each Underwriter agrees, severally and not jointly, to indemnify and hold harmless the Company, its directors, its officers who sign the Registration Statement and each person, if any, who controls the Company within the meaning of either Section 15 of the Securities Act or Section 20 of the Exchange Act to the same extent as the foregoing indemnity from the Company to such Underwriter, but only with reference to information relating to such Underwriter furnished to the Company in writing by such Underwriter through you expressly for use in the Registration Statement, any preliminary prospectus, the Time of Sale Prospectus, any issuer free writing prospectus, road show, or the Prospectus or any amendment or supplement thereto; it being agreed and understood that they only such information furnished by any Underwriter consists of the following information in the Prospectus furnished on behalf of each Underwriter under the heading “Underwriters”: the third paragraph beginning with the words “The underwriters initially propose to offer”, and the twelfth paragraph beginning with the words “In order to facilitate the offering.”.

(c) In case any proceeding (including any governmental investigation) shall be instituted involving any person in respect of which indemnity may be sought pursuant to Section 8(a) or 8(b), such person (the “**indemnified party**”) shall promptly notify the person against whom such indemnity may be sought (the “**indemnifying party**”) in writing and the indemnifying party, upon request of the indemnified party, shall retain counsel reasonably satisfactory to the indemnified party to represent the indemnified party and any others the indemnifying party may designate in such proceeding and shall pay reasonably incurred fees and disbursements of such counsel related to such proceeding. In any such proceeding, any indemnified party shall have the right to retain its own counsel, but the fees and expenses of such counsel shall be at the expense of such indemnified party unless (i) the indemnifying party and the indemnified party shall have mutually agreed to the retention of such counsel or (ii) the named parties to any such proceeding (including any impleaded parties) include both the indemnifying party and the indemnified party and representation of both parties by the same counsel would be inappropriate due to actual or potential differing interests between them. It is understood that the indemnifying party shall not, in respect of the legal expenses of any indemnified party in connection with any proceeding or related proceedings in the same jurisdiction, be liable for the fees and expenses of more than one separate firm (in addition to any local counsel) for all such indemnified parties and that all such fees and expenses shall be reimbursed as they are incurred. Such firm shall be designated in writing by the Representatives, in the case of parties indemnified pursuant to Section 8(a), and by the Company, in the case of parties indemnified pursuant to Section 8(b). The indemnifying party shall not be liable for any settlement of any proceeding effected without its written consent, but if settled with such consent or if there be a final judgment for the plaintiff, the indemnifying party agrees to indemnify the indemnified party from and against any loss or liability by reason of such settlement or judgment. Notwithstanding the foregoing sentence, if at any time an indemnified party shall have requested an indemnifying party to reimburse the indemnified party for fees and expenses of counsel as contemplated by the second and third sentences of this paragraph, the indemnifying party agrees that it shall be liable for any settlement of any proceeding effected without its written consent if (i) such settlement is entered into more than 45 days after receipt by such indemnifying party of the aforesaid request and (ii) such indemnifying party shall not have reimbursed the indemnified party in accordance with such request prior to the date of such settlement. No indemnifying party shall, without the prior written consent of the indemnified party, effect any settlement of any pending or threatened proceeding in respect of which any indemnified party is or could have been a party and indemnity could have been sought hereunder by such indemnified party, unless such settlement (i) includes an unconditional release of such indemnified party from all liability on claims that are the subject matter of such proceeding and (ii) does not include a statement as to or an admission of fault, culpability or a failure to act by or on behalf of any indemnified party.

(d) To the extent the indemnification provided for in Section 8(a) or 8(b) is unavailable to an indemnified party or insufficient in respect of any losses, claims, damages or liabilities referred to therein, then each indemnifying party under such paragraph, in lieu of indemnifying such indemnified party thereunder, shall contribute to the amount paid or payable by such indemnified party as a result of such losses, claims, damages or liabilities (i) in such proportion as is appropriate to reflect the relative benefits received by the Company on the one hand and the Underwriters on the other hand from the offering of the Shares or (ii) if the allocation provided by clause 8(d)(i) above is not permitted by applicable law, in such proportion as is appropriate to reflect not only the relative benefits referred to in clause 8(d)(i) above but also the relative fault of the Company on the one hand and of the Underwriters on the other hand in connection with the statements or omissions that resulted in such losses, claims, damages or liabilities, as well as any other relevant equitable considerations. The relative benefits received by the Company on the one hand and the Underwriters on the other hand in connection with the offering of the Shares shall be deemed to be in the same respective proportions as the net proceeds from the offering of the Shares (before deducting expenses) received by the Company and the total underwriting discounts and commissions received by the Underwriters, in each case as set forth in the table on the cover of the Prospectus, bear to the aggregate Public Offering Price of the Shares. The relative fault of the Company on the one hand and the Underwriters on the other hand shall be determined by reference to, among other things, whether the untrue or alleged untrue statement of a material fact or the omission or alleged omission to state a material fact relates to information supplied by the Company or by the Underwriters and the parties' relative intent, knowledge, access to information and opportunity to correct or prevent such statement or omission. The Underwriters' respective obligations to contribute pursuant to this Section 8 are several in proportion to the respective number of Shares they have purchased hereunder, and not joint.

(e) The Company and the Underwriters agree that it would not be just or equitable if contribution pursuant to this Section 8 were determined by *pro rata* allocation (even if the Underwriters were treated as one entity for such purpose) or by any other method of allocation that does not take account of the equitable considerations referred to in Section 8(d). The amount paid or payable by an indemnified party as a result of the losses, claims, damages and liabilities referred to in Section 8(d) shall be deemed to include, subject to the limitations set forth above, any legal or other expenses reasonably incurred by such indemnified party in connection with investigating or defending any such action or claim. Notwithstanding the provisions of this Section 8, no Underwriter shall be required to contribute any amount in excess of the amount by which the total price at which the Shares underwritten by it and distributed to the public were offered to the public exceeds the amount of any damages that such Underwriter has otherwise been required to pay by reason of such untrue or alleged untrue statement or omission or alleged omission. No person guilty of fraudulent misrepresentation (within the meaning of Section 11(f) of the Securities Act) shall be entitled to contribution from any person who was not guilty of such fraudulent misrepresentation. The remedies provided for in this Section 8 are not exclusive and shall not limit any rights or remedies which may otherwise be available to any indemnified party at law or in equity.

(f) The indemnity and contribution provisions contained in this Section 8 and the representations, warranties and other statements of the Company contained in this Agreement shall remain operative and in full force and effect regardless of (i) any termination of this Agreement, (ii) any investigation made by or on behalf of any Underwriter, any person controlling any Underwriter or any affiliate of any Underwriter or by or on behalf of the Company, its officers or directors or any person controlling the Company and (iii) acceptance of and payment for any of the Shares.

9. *Termination.* The Underwriters may terminate this Agreement by notice given by you to the Company, if after the execution and delivery of this Agreement and prior to or on the Closing Date or any Option Closing Date, as the case may be, (i) trading generally shall have been suspended or materially limited on, or by, as the case may be, any of the New York Stock Exchange, the NYSE American, the NASDAQ Global Market, the Chicago Board of Options Exchange, the Chicago Mercantile Exchange or the Chicago Board of Trade, (ii) trading of any securities of the Company shall have been suspended on any exchange or in any over-the-counter market, (iii) a material disruption in securities settlement, payment or clearance services in the United States shall have occurred, (iv) any moratorium on commercial banking activities shall have been declared by Federal or New York State or relevant foreign country authorities or (v) there shall have occurred any outbreak or escalation of hostilities, or any change in financial markets or any calamity or crisis that, in your judgment, is material and adverse and which, singly or together with any other event specified in this clause (v), makes it, in your judgment, impracticable or inadvisable to proceed with the offer, sale or delivery of the Shares on the terms and in the manner contemplated in the Time of Sale Prospectus or the Prospectus.

10. *Effectiveness; Defaulting Underwriters.* This Agreement shall become effective upon the execution and delivery hereof by the parties hereto.

If, on the Closing Date or an Option Closing Date, as the case may be, any one or more of the Underwriters shall fail or refuse to purchase Shares that it has or they have agreed to purchase hereunder on such date, and the aggregate number of Shares which such defaulting Underwriter or Underwriters agreed but failed or refused to purchase is not more than one-tenth of the aggregate number of the Shares to be purchased on such date, the other Underwriters shall be obligated severally in the proportions that the number of Firm Shares set forth opposite their respective names in Schedule I bears to the aggregate number of Firm Shares set forth opposite the names of all such non-defaulting Underwriters, or in such other proportions as you may specify, to purchase the Shares which such defaulting Underwriter or Underwriters agreed but failed or refused to purchase on such date; *provided* that in no event shall the number of Shares that any Underwriter has agreed to purchase pursuant to this Agreement be increased pursuant to this Section 10 by an amount in excess of one-ninth of such number of Shares without the written consent of such Underwriter. If, on the Closing Date, any Underwriter or Underwriters shall fail or refuse to purchase Firm Shares and the aggregate number of Firm Shares with respect to which such default occurs is more than one-tenth of the aggregate number of Firm Shares to be purchased on such date, and arrangements satisfactory to you and the Company for the purchase of such Firm Shares are not made within 36 hours after such default, this Agreement shall terminate without liability on the part of any non-defaulting Underwriter or the Company. In any such case either you or the Company shall have the right to postpone the Closing Date, but in no event for longer than seven days, in order that the required changes, if any, in the Registration Statement, in the Time of Sale Prospectus, in the Prospectus or in any other documents or arrangements may be effected. If, on an Option Closing Date, any Underwriter or Underwriters shall fail or refuse to purchase Additional Shares and the aggregate number of Additional Shares with respect to which such default occurs is more than one-tenth of the aggregate number of Additional Shares to be purchased on such Option Closing Date, the non-defaulting Underwriters shall have the option to (i) terminate their obligation hereunder to purchase the Additional Shares to be sold on such Option Closing Date or (ii) purchase not less than the number of Additional Shares that such non-defaulting Underwriters would have been obligated to purchase in the absence of such default. Any action taken under this paragraph shall not relieve any defaulting Underwriter from liability in respect of any default of such Underwriter under this Agreement.

If this Agreement shall be terminated by the Underwriters, or any of them, because of any failure or refusal on the part of the Company to comply with the terms or to fulfill any of the conditions of this Agreement, or if for any reason the Company shall be unable to perform its obligations under this Agreement, the Company will reimburse the Underwriters or such Underwriters as have so terminated this Agreement with respect to themselves, severally, for all out-of-pocket expenses (including the fees and disbursements of their counsel) reasonably incurred by such Underwriters in connection with this Agreement or the offering contemplated hereunder.

11. *Entire Agreement.* (a) This Agreement, together with any contemporaneous written agreements and any prior written agreements (to the extent not superseded by this Agreement) that relate to the offering of the Shares, represents the entire agreement between the Company and the Underwriters with respect to the preparation of any preliminary prospectus, the Time of Sale Prospectus, the Prospectus, the conduct of the offering, and the purchase and sale of the Shares.

(b) The Company acknowledges that in connection with the offering of the Shares: (i) the Underwriters have acted at arm's length, are not agents of, and owe no fiduciary duties to, the Company or any other person, (ii) the Underwriters owe the Company only those duties and obligations set forth in this Agreement, any contemporaneous written agreements and prior written agreements (to the extent not superseded by this Agreement), if any, and (iii) the Underwriters may have interests that differ from those of the Company. The Company waives to the full extent permitted by applicable law any claims it may have against the Underwriters arising from an alleged breach of fiduciary duty in connection with the offering of the Shares.

12. *Recognition of the U.S. Special Resolution Regimes.* (a) In the event that any Underwriter that is a Covered Entity becomes subject to a proceeding under a U.S. Special Resolution Regime, the transfer from such Underwriter of this Agreement, and any interest and obligation in or under this Agreement, will be effective to the same extent as the transfer would be effective under the U.S. Special Resolution Regime if this Agreement, and any such interest and obligation, were governed by the laws of the United States or a state of the United State.

(b) In the event that any Underwriter that is a Covered Entity or a BHC Act Affiliate of such Underwriter becomes subject to a proceeding under a U.S. Special Resolution Regime, Default Rights under this Agreement that may be exercised against such Underwriter are permitted to be exercised to no greater extent than such Default Rights could be exercised under the U.S. Special Resolution Regime if this Agreement were governed by the laws of the United States or a state of the United States.

For purposes of this Section a "**BHC Act Affiliate**" has the meaning assigned to the term "affiliate" in, and shall be interpreted in accordance with, 12 U.S.C. § 1841(k). "**Covered Entity**" means any of the following: (i) a "covered entity" as that term is defined in, and interpreted in accordance with, 12 C.F.R. § 252.82(b); (ii) a "covered bank" as that term is defined in, and interpreted in accordance with, 12 C.F.R. § 47.3(b); or (iii) a "covered FSI" as that term is defined in, and interpreted in accordance with, 12 C.F.R. § 382.2(b). "**Default Right**" has the meaning assigned to that term in, and shall be interpreted in accordance with, 12 C.F.R. §§ 252.81, 47.2 or 382.1, as applicable. "**U.S. Special Resolution Regime**" means each of (i) the Federal Deposit Insurance Act and the regulations promulgated thereunder and (ii) Title II of the Dodd-Frank Wall Street Reform and Consumer Protection Act and the regulations promulgated thereunder.

13. *Counterparts.* This Agreement may be signed in two or more counterparts, each of which shall be an original, with the same effect as if the signatures thereto and hereto were upon the same instrument.

14. *Applicable Law.* This Agreement shall be governed by and construed in accordance with the internal laws of the State of New York.

15. *Consent to Jurisdiction; Waiver of Immunity.* Any legal suit, action or proceeding arising out of or based upon this Agreement or the transactions contemplated hereby (“**Related Proceedings**”) shall be instituted in (i) the federal courts of the United States of America located in the City and County of New York, Borough of Manhattan or (ii) the courts of the State of New York located in the City and County of New York, Borough of Manhattan (collectively, the “**Specified Courts**”), and each party irrevocably submits to the exclusive jurisdiction (except for proceedings instituted in regard to the enforcement of a judgment of any such court (a “**Related Judgment**”), as to which such jurisdiction is non-exclusive) of such courts in any such suit, action or proceeding. Service of any process, summons, notice or document by mail to such party’s address set forth above shall be effective service of process for any suit, action or other proceeding brought in any such court. The parties irrevocably and unconditionally waive any objection to the laying of venue of any suit, action or other proceeding in the Specified Courts and irrevocably and unconditionally waive and agree not to plead or claim in any such court that any such suit, action or other proceeding brought in any such court has been brought in an inconvenient forum. The Company has irrevocably appointed Theravance Biopharma US, Inc. as its agent to receive service of process or other legal summons for purposes of any such suit, action or proceeding that may be instituted in any state or federal court in the City and County of New York. With respect to any Related Proceeding, each party irrevocably waives, to the fullest extent permitted by applicable law, all immunity (whether on the basis of sovereignty or otherwise) from jurisdiction, service of process, attachment (both before and after judgment) and execution to which it might otherwise be entitled in the Specified Courts, and with respect to any Related Judgment, each party waives any such immunity in the Specified Courts or any other court of competent jurisdiction, and will not raise or claim or cause to be pleaded any such immunity at or in respect of any such Related Proceeding or Related Judgment, including, without limitation, any immunity pursuant to the United States Foreign Sovereign Immunities Act of 1976, as amended.

16. *Taxes.* All payments to be made by the Company under this Agreement shall be paid free and clear of and without deduction or withholding for or on account of, any present or future taxes, levies, imposts, duties, fees, assessments or other charges of whatever nature, imposed by the Cayman Islands, Ireland, any other jurisdiction in which the Company is organized, doing business or resident for tax purposes or any jurisdiction from or through which a payment is made, or by any department, agency or other political subdivision or taxing authority thereof (each, a “**Taxing Jurisdiction**”), and all interest, penalties or similar liabilities with respect thereto (collectively, “**Taxes**”), except as required by law. If any Taxes are required by law to be deducted or withheld in connection with such payments, the Company will increase the amount paid so that the full amount of such payment is received by the Underwriters, except to the extent that such Taxes were imposed due to any Underwriter or any agent thereof having any present or former connection with a Taxing Jurisdiction other than solely as a result of (A) the execution and delivery of, or performance of, its obligations under this Agreement, (B) receiving or paying for the Securities or (C) receiving any payments or enforcing any rights hereunder.

17. *Judgment Currency.* If for the purposes of obtaining judgment in any court it is necessary to convert a sum due hereunder into any currency other than United States dollars, the parties hereto agree, to the fullest extent permitted by law, that the rate of exchange used shall be the rate at which in accordance with normal banking procedures the Underwriters could purchase United States dollars with such other currency in The City of New York on the business day preceding that on which final judgment is given. The obligations of the Company pursuant to this Agreement in respect of any sum due to any Underwriter shall, notwithstanding any judgment in a currency other than United States dollars, not be discharged until the first business day, following receipt by such Underwriter of any sum adjudged to be so due in such other currency, on which (and only to the extent that) such Underwriter may in accordance with normal banking procedures purchase United States dollars with such other currency; if the United States dollars so purchased (net of any premiums and costs of exchange payable in connection with the purchase of United States dollars) are less than the sum originally due to such Underwriter hereunder, the Company agrees, as a separate obligation and notwithstanding any such judgment, to indemnify such Underwriter against such loss.

18. *Trial by Jury.* The Company (on its behalf and, to the extent permitted by applicable law, on behalf of its stockholders and affiliates) and each of the Underwriters hereby irrevocably waives, to the fullest extent permitted by applicable law, any and all right to trial by jury in any legal proceeding arising out of or relating to this Agreement or the transactions contemplated hereby.

19. *Headings.* The headings of the sections of this Agreement have been inserted for convenience of reference only and shall not be deemed a part of this Agreement.

20. *Notices.* All communications hereunder shall be in writing and effective only upon receipt and if to the Underwriters shall be delivered, mailed or sent to you in care of Morgan Stanley & Co. LLC, 1585 Broadway, New York, New York 10036, Attention: Equity Syndicate Desk, with a copy to the Legal Department; in care of J.P. Morgan Securities LLC, 383 Madison Avenue, New York, New York 10179 (fax: (212) 622-8358); Attention Equity Syndicate Desk; in care of Cowen and Company, LLC, 599 Lexington Avenue, New York, New York, 10022 Attention: Head of Equity Capital Markets, with a copy to the General Counsel; and if to the Company shall be delivered, mailed or sent to Theravance Biopharma, Inc. c/o Theravance Biopharma US, Inc., at 901 Gateway Boulevard, South San Francisco, California 94080, Attention: General Counsel.

Very truly yours,

Theravance Biopharma, Inc.

By: /s/ Andrew A. Hindman

Name: Andrew A. Hindman

Title: Chief Financial Officer

Accepted as of the date hereof

Morgan Stanley & Co. LLC  
J.P. Morgan Securities LLC  
Cowen and Company, LLC

Acting severally on behalf of themselves  
and the several Underwriters named in  
Schedule I hereto.

By: Morgan Stanley & Co. LLC

By: /s/ Chris Rigoli

\_\_\_\_\_  
Name: Chris Rigoli

Title: Vice President

By: J.P. Morgan Securities LLC

By: /s/ Ben Burdett

\_\_\_\_\_  
Name: Ben Burdett

Title: Managing Director

By: Cowen and Company, LLC

By: /s/ E. James Streater, III

\_\_\_\_\_  
Name: E. James Streater, III

Title: Managing Director

**SCHEDULE I**

<b>Underwriter</b>	<b>Number of Firm Shares To Be Purchased</b>
Morgan Stanley & Co. LLC	1,760,001
J.P. Morgan Securities LLC	1,760,000
Cowen and Company, LLC	1,100,000
Credit Suisse Securities (USA) LLC.	293,333
Cantor Fitzgerald & Co.	293,333
Needham & Company, LLC	293,333
<b>Total:</b>	<b>5,500,000</b>

**Time of Sale Prospectus**

Preliminary Prospectus issued February 10, 2020

Free writing prospectuses filed by the Company under Rule 433(d) of the Securities Act: None.

Pricing Information Conveyed Orally by the Underwriters:

- Firm Shares: 5,500,000
- Additional Shares: 825,000
- Price to Public: \$27.00 per share

**List of subsidiaries of the Company**

Theravance Biopharma US, Inc. (Delaware)

Theravance Biopharma R&D, Inc. (Cayman Islands)

Theravance Biopharma UK Limited (England and Wales)

Theravance Biopharma Ireland Limited (Ireland)

Theravance Biopharma R&D IP, LLC (Delaware)

Theravance Biopharma Antibiotics IP, LLC (Delaware)

Triple Royalty Sub LLC (Delaware)

## FORM OF LOCK-UP AGREEMENT

\_\_\_\_\_, 2020

Morgan Stanley & Co. LLC  
J.P. Morgan Securities LLC  
Cowen and Company, LLC

c/o Morgan Stanley & Co. LLC  
1585 Broadway  
New York, New York 10036

c/o J.P. Morgan Securities LLC  
383 Madison Avenue  
New York, New York 10179

c/o Cowen and Company, LLC  
599 Lexington Avenue  
New York, New York 10022

Ladies and Gentlemen:

The undersigned understands that Morgan Stanley & Co. LLC, J.P. Morgan Securities LLC and Cowen and Company, LLC, as representatives (together, the “**Representatives**”) of the several underwriters (the “**Underwriters**”), including the Representatives, propose to enter into an Underwriting Agreement (the “**Underwriting Agreement**”) with Theravance Biopharma, Inc., a Cayman Islands exempted company (the “**Company**”), providing for the public offering (the “**Public Offering**”) by the several Underwriters, of a number of ordinary shares (the “**Shares**”), par value \$0.00001 per share, of the Company (the “**Ordinary Shares**”).

To induce the Underwriters that may participate in the Public Offering to continue their efforts in connection with the Public Offering, the undersigned hereby agrees that, without the prior written consent of Morgan Stanley & Co. LLC and J.P. Morgan Securities LLC on behalf of the Underwriters, it will not, and will not publicly disclose an intention to, during the period commencing on the date hereof and ending 90 days after the date of the final prospectus supplement (the “**Restricted Period**”) relating to the Public Offering (the “**Prospectus**”), (1) offer, pledge, sell, contract to sell, sell any option or contract to purchase, purchase any option or contract to sell, grant any option, right or warrant to purchase, lend, or otherwise transfer or dispose of, directly or indirectly, any Ordinary Shares beneficially owned (as such term is used in Rule 13d-3 of the Securities Exchange Act of 1934, as amended (the “**Exchange Act**”), by the undersigned or any other securities so owned convertible into or exercisable or exchangeable for Ordinary Shares (collectively, the “**Lock-Up Securities**”) or (2) enter into any swap or other arrangement that transfers to another, in whole or in part, any of the economic consequences of ownership of the Lock-Up Securities, whether any such transaction described in clause (1) or (2) above is to be settled by delivery of Ordinary Shares or such other securities, in cash or otherwise.

Notwithstanding the foregoing, the undersigned may transfer the Lock-Up Securities (i) as a *bona fide* gift or gifts, provided that the donee or donees thereof agree to be bound in writing by the restrictions set forth herein, (ii) to any trust for the direct or indirect benefit of the undersigned or the immediate family of the undersigned, provided that the trustee of the trust agrees to be bound in writing by the restrictions set forth herein, and provided further that any such transfer shall not involve a disposition for value, or (iii) with the prior written consent of Morgan Stanley & Co. LLC and J.P. Morgan Securities LLC, provided, however, that in the case of clauses (i) and (ii), no party, including the undersigned, shall (a) be required to, nor shall it voluntarily, file a report under the Securities Exchange Act of 1934, as amended (the “**Exchange Act**”), in connection with such transfer (other than a filing on Form 5 made after the expiration of the Restricted Period) or (b) otherwise voluntarily effect any public filing, report or announcement of such transfer. For purposes of this agreement, “immediate family” shall mean any relationship by blood, marriage or adoption, not more remote than first cousin. In addition, notwithstanding the foregoing, if the undersigned is a corporation, the corporation may transfer the Lock-Up Securities to any wholly-owned subsidiary of such corporation; provided, however, that in any such case, it shall be a condition to the transfer that the transferee execute an agreement stating that the transferee is receiving and holding such Lock-Up Securities subject to the provisions of this agreement and there shall be no further transfer of such Lock-Up Securities except in accordance with this agreement, and provided further that any such transfer shall not involve a disposition for value. Further, notwithstanding the foregoing, the undersigned may enter into a new plan to transfer or sell Ordinary Shares pursuant to any contract, instruction or plan complying with Rule 10b5-1 of the Securities and Exchange Commission promulgated under the Exchange Act after the date of this agreement (a “**New 10b5-1 Plan**”); provided, that such New 10b5-1 Plan does not permit transfers or sales of Ordinary Shares, and no transfers or sales of Ordinary Shares pursuant to such plan occur, until on or after the expiration of the Restricted Period; and provided, further, that no party, including the undersigned, shall (a) be required to, nor shall it voluntarily, file a report under the Exchange Act in connection with the entry into a New 10b5-1 Plan or (b) otherwise voluntarily effect any public filing, report or announcement of the entry into a New 10b5-1 Plan. Furthermore, the undersigned may (x) surrender Ordinary Shares to the Company upon the vesting or settlement of any restricted share or restricted share unit award of the Company (collectively, “**Restricted Shares**”) held by the undersigned and issued under the Company’s equity incentive plans described in the Prospectus (or the documents incorporated therein by reference), provided that such surrender is solely for the purpose of covering the undersigned’s tax withholding liability in connection with the vesting or settlement of such Restricted Shares pursuant to a share withholding program approved by the Company’s Board of Directors or Compensation Committee of the Company’s Board of Directors (the “**Compensation Committee**”) prior to the date of this agreement, or (y) sell Ordinary Shares to cover such tax withholding liability through a broker in accordance with the terms of the applicable equity incentive plan or arrangement approved by the Company’s Board of Directors or Compensation Committee prior to the date hereof; provided that, if the undersigned is required to file a report under the 1934 Act, during the Restricted Period related to such disposition of Ordinary Shares by the undersigned solely to cover the undersigned’s tax withholding liability, the undersigned shall include a statement in such report to the effect that the filing relates to the satisfaction of the undersigned’s tax withholding liability in connection with the vesting or settlement of such Restricted Shares.

In addition, the undersigned agrees that, without the prior written consent of Morgan Stanley & Co. LLC and J.P. Morgan Securities LLC on behalf of the Underwriters, it will not, during the Restricted Period, make any demand for or exercise any right with respect to, the registration of any Ordinary Shares or any security convertible into or exercisable or exchangeable for Ordinary Shares. The undersigned also agrees and consents to the entry of stop transfer instructions with the Company's transfer agent and registrar against the transfer of the undersigned's Lock-Up Securities except in compliance with the foregoing restrictions.

The undersigned understands that the Company and the Underwriters are relying upon this agreement in proceeding toward consummation of the Public Offering. The undersigned further understands that this agreement is irrevocable and shall be binding upon the undersigned's heirs, legal representatives, successors and assigns.

This agreement shall automatically terminate upon the earlier to occur of: (i) the Company advising the Representatives in writing prior to the execution of the Underwriting Agreement that it does not intend to proceed with the Public Offering, (ii) the termination of the Underwriting Agreement before the closing of the Public Offering or (iii) May 31, 2020, if the Underwriting Agreement has not been executed by that date.

Whether or not the Public Offering actually occurs depends on a number of factors, including market conditions. Any Public Offering will only be made pursuant to an Underwriting Agreement, the terms of which are subject to negotiation between the Company and the Underwriters.

This agreement shall be governed by and construed in accordance with the laws of the State of New York.

*[Signature page follows]*

Very truly yours,

**IF AN INDIVIDUAL:**

By: \_\_\_\_\_  
(duly authorized signature)

Name: \_\_\_\_\_  
(please print full name)

Date: \_\_\_\_\_

**IF AN ENTITY:**

\_\_\_\_\_  
(please print complete name of entity)

By: \_\_\_\_\_  
(duly authorized signature)

Name: \_\_\_\_\_  
(please print full name)

Date: \_\_\_\_\_

*[Signature Page to Lock-up Letter]*



Our ref MUL/683401-000001/61603729v3

Theravance Biopharma, Inc.  
PO Box 309, Ugland House  
Grand Cayman  
KY1-1104  
Cayman Islands

12 February 2020

**Theravance Biopharma, Inc.**

We have acted as counsel as to Cayman Islands law to Theravance Biopharma, Inc. (the "**Company**") in connection with the offering, issue and sale by the Company of an aggregate of up to 6,325,000 of ordinary shares of the Company of a par value of US\$0.00001 each (the "**Ordinary Shares**") pursuant to the terms of an underwriting agreement dated as of 11 February 2020 (the "**Document**") between the Company and Morgan Stanley & Co. LLC, J.P. Morgan Securities LLC and Cowen and Company, LLC as the representatives (the "**Representatives**") of the several underwriters named therein (the "**Underwriters**").

This opinion letter is given in accordance with the terms of the Legal Matters section of the Registration Statement.

**1 Documents Reviewed**

We have reviewed originals, copies, drafts or conformed copies of the following documents:

- 1.1 The Certificate of Incorporation dated 29 July 2013 and the amended and restated memorandum and articles of association of the Company adopted on 28 April 2014 (the "**Memorandum and Articles**").
- 1.2 The certified extract of the minutes (the "**Board Minutes**") of the meeting of the board of directors of the Company held on 4 February 2020 (the "**Board Meeting**"), certified extract of the minutes (the "**Committee Minutes**") of the meeting of the pricing committee of the board of directors of the Company (the "**Committee**") held on 11 February 2020 (the "**Committee Meeting**") and the corporate records of the Company maintained at its registered office in the Cayman Islands.
- 1.3 A certificate of good standing with respect to the Company issued by the Registrar of Companies (the "**Certificate of Good Standing**").

**Maples and Calder**

PO Box 309 Ugland House Grand Cayman KY1-1104 Cayman Islands  
Tel +1345 949 8066 Fax +1345 949 8080 [maples.com](http://maples.com)

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- 1.4 A certificate from a director of the Company a copy of which is attached to this opinion letter (the "**Director's Certificate**").
- 1.5 The Registration Statement on Form S-3 (File No. 3333-235339), including all amendments or supplements thereto, including the Form 8-K, filed with the United States Securities and Exchange Commission under the United States Securities Act of 1933 as amended (including its exhibits) related to securities to be issued and sold by the Company from time to time (the "**Registration Statement**").
- 1.6 The Document.

## 2 **Assumptions**

The following opinions are given only as to, and based on, circumstances and matters of fact existing and known to us on the date of this opinion letter. These opinions only relate to the laws of the Cayman Islands which are in force on the date of this opinion letter. In giving the following opinions, we have relied (without further verification) upon the completeness and accuracy, as at the date of this opinion letter, of the Director's Certificate and the Certificate of Good Standing. We have also relied upon the following assumptions, which we have not independently verified:

- 2.1 The Document has been or will be authorised and duly executed and unconditionally delivered by or on behalf of all relevant parties in accordance with all relevant laws (other than, with respect to the Company, the laws of the Cayman Islands).
- 2.2 The Document is, or will be, legal, valid, binding and enforceable against all relevant parties in accordance with its terms under the laws of the State of New York (the "**Relevant Law**") and all other relevant laws (other than, with respect to the Company, the laws of the Cayman Islands).
- 2.3 The choice of the Relevant Law as the governing law of the Document has been made in good faith and would be regarded as a valid and binding selection which will be upheld by the courts of the State of New York and any other relevant jurisdiction (other than the Cayman Islands) as a matter of the Relevant Law and all other relevant laws (other than the laws of the Cayman Islands).
- 2.4 Copies of documents, conformed copies or drafts of documents provided to us are true and complete copies of, or in the final forms of, the originals.
- 2.5 All signatures, initials and seals are genuine.
- 2.6 The capacity, power, authority and legal right of all parties under all relevant laws and regulations (other than, with respect to the Company, the laws and regulations of the Cayman Islands) to enter into, execute, unconditionally deliver and perform their respective obligations under the Document.
- 2.7 No invitation has been or will be made by or on behalf of the Company to the public in the Cayman Islands to subscribe for any of the Ordinary Shares.
- 2.8 There is no contractual or other prohibition or restriction (other than as arising under Cayman Islands law) binding on the Company prohibiting or restricting it from entering into and performing its obligations under the Document.

- 2.9 No monies paid to or for the account of any party under the Document or any property received or disposed of by any party to the Document in each case in connection with the Document or the consummation of the transactions contemplated thereby represent or will represent proceeds of criminal conduct or criminal property or terrorist property (as defined in the Proceeds of Crime Law (2020 Revision) and the Terrorism Law (2018 Revision), respectively).
- 2.10 There is nothing under any law (other than the laws of the Cayman Islands) which would or might affect the opinions set out below. Specifically, we have made no independent investigation of the Relevant Law.
- 2.11 The Company will receive money or money's worth in consideration for the issue of the Ordinary Shares and none of the Ordinary Shares were or will be issued for less than par value.

Save as aforesaid we have not been instructed to undertake and have not undertaken any further enquiry or due diligence in relation to the transaction the subject of this opinion letter.

### **3 Opinions**

Based upon, and subject to, the foregoing assumptions and the qualifications set out below, and having regard to such legal considerations as we deem relevant, we are of the opinion that:

- 3.1 The Company has been duly incorporated as an exempted company with limited liability and is validly existing and in good standing with the Registrar of Companies under the laws of the Cayman Islands.
- 3.2 The Ordinary Shares to be offered and issued by the Company as contemplated by the Document have been duly authorised for issue, and when issued by the Company against payment in full of the consideration as set out in the Document and in accordance with the terms set out in the Document, such Ordinary Shares will be validly issued, fully paid and non-assessable. As a matter of Cayman Islands law, a share is only issued when it has been entered in the register of members (shareholders).
- 3.3 The execution, delivery and performance of the Document have been authorised by and on behalf of the Company and, once the Document has been executed and delivered by any director or officer of the Company, the Document will be duly executed and delivered on behalf of the Company and will constitute the legal, valid and binding obligations of the Company enforceable in accordance with its terms.

## 4 Qualifications

The opinions expressed above are subject to the following qualifications:

- 4.1 The term "**enforceable**" as used above means that the obligations assumed by the Company under the Document are of a type which the courts of the Cayman Islands will enforce. It does not mean that those obligations will necessarily be enforced in all circumstances in accordance with their terms. In particular:
- (a) enforcement may be limited by bankruptcy, insolvency, liquidation, reorganisation, readjustment of debts or moratorium or other laws of general application relating to or affecting the rights of creditors;
  - (b) enforcement may be limited by general principles of equity. For example, equitable remedies such as specific performance may not be available, *inter alia*, where damages are considered to be an adequate remedy;
  - (c) where obligations are to be performed in a jurisdiction outside the Cayman Islands, they may not be enforceable in the Cayman Islands to the extent that performance would be illegal under the laws of that jurisdiction; and
  - (d) some claims may become barred under relevant statutes of limitation or may be or become subject to defences of set off, counterclaim, estoppel and similar defences.
- 4.2 To maintain the Company in good standing with the Registrar of Companies under the laws of the Cayman Islands, annual filing fees must be paid and returns made to the Registrar of Companies within the time frame prescribed by law.
- 4.3 Under Cayman Islands law, the register of members (shareholders) is *prima facie* evidence of title to shares and this register would not record a third party interest in such shares. However, there are certain limited circumstances where an application may be made to a Cayman Islands court for a determination on whether the register of members reflects the correct legal position. Further, the Cayman Islands court has the power to order that the register of members maintained by a company should be rectified where it considers that the register of members does not reflect the correct legal position. As far as we are aware, such applications are rarely made in the Cayman Islands and for the purposes of the opinion given in paragraph 3.2, there are no circumstances or matters of fact known to us on the date of this opinion letter which would properly form the basis for an application for an order for rectification of the register of members of the Company, but if such an application were made in respect of the Ordinary Shares, then the validity of such shares may be subject to re-examination by a Cayman Islands court.
- 4.4 Except as specifically stated herein, we make no comment with respect to any representations and warranties which may be made by or with respect to the Company in any of the Document or instruments cited in this opinion letter or otherwise with respect to the commercial terms of the transactions the subject of this opinion letter.
- 4.5 In this opinion letter, the phrase "non-assessable" means, with respect to the issuance of shares, that a shareholder shall not, in respect of the relevant shares and in the absence of a contractual arrangement, or an obligation pursuant to the memorandum and articles of association, to the contrary, have any obligation to make further contributions to the Company's assets (except in exceptional circumstances, such as involving fraud, the establishment of an agency relationship or an illegal or improper purpose or other circumstances in which a court may be prepared to pierce or lift the corporate veil).

We hereby consent to the filing of this opinion letter as an exhibit to the Registration Statement and to the reference to our firm under the heading "Legal Matters" in the prospectus included in the Registration Statement. In providing our consent, we do not thereby admit that we are in the category of persons whose consent is required under Section 7 of the Act or the Rules and Regulations of the Commission thereunder.

This opinion letter is addressed to you and may be relied upon by you, your counsel and the Underwriters. This opinion letter is limited to the matters detailed herein and is not to be read as an opinion with respect to any other matter.

Yours faithfully

/s/ Maples and Calder

Maples and Calder



## SUMMARY

### Overview

Theravance Biopharma, Inc. ("Theravance Biopharma") is a diversified biopharmaceutical company primarily focused on the discovery, development and commercialization of organ-selective medicines. Our purpose is to create transformational medicines to improve the lives of patients suffering from serious illnesses. Our research is focused in the areas of inflammation and immunology.

In pursuit of our purpose, we apply insights and innovation at each stage of our business and utilize our internal capabilities and those of partners around the world. We apply organ-selective expertise to biologically compelling targets to discover and develop medicines designed to treat underserved localized diseases and to limit systemic exposure, in order to maximize patient benefit and minimize risk. These efforts leverage years of experience in developing lung-selective medicines to treat respiratory disease, including the United States ("US") Food and Drug Administration (the "FDA") approved YUPELRI® (revefenacin) inhalation solution indicated for the maintenance treatment of patients with chronic obstructive pulmonary disease ("COPD"). Our pipeline of internally discovered programs is targeted to address significant patient needs.

We have an economic interest in potential future payments from Glaxo Group or one of its affiliates ("GSK") pursuant to its agreements with Innoviva, Inc. ("Innoviva") relating to certain programs, including TRELEGY ELLIPTA.

### Our Programs

The table below summarizes the status of our approved product and our other product candidates in development. The table also includes the status of the respiratory programs in which we have an economic interest and for which GSK is responsible pursuant to agreements between Innoviva and GSK ("GSK-Partnered Respiratory Programs"). These programs consist primarily of the TRELEGY ELLIPTA program. We have an economic interest in these programs through our interest in Theravance Respiratory Company, LLC, a limited liability company managed by Innoviva. The status of all GSK-Partnered Respiratory Programs referenced in this prospectus supplement are based solely upon publicly available information and may not reflect the most recent developments under the programs.

	Program	Indication	Research	Phase 1	Phase 2	Phase 3	Filed	Marketed	Collaborator
Organ-selective	YUPELRI® (revefenacin) LAMA	COPD	[Progress bar through Research, Phase 1, Phase 2, Phase 3]					Marketed	Mylan
	TD-1473 (JNJ-8398) GI JAKi	UC	[Progress bar through Research, Phase 1, Phase 2, Phase 2b/3]						Janssen
		CD	[Progress bar through Research, Phase 1, Phase 2]						Janssen
	TD-8236 Inhaled JAKi	Inflammatory lung diseases	[Progress bar through Research, Phase 1, Phase 2]						Wholly-owned
	TD-5202 Irreversible JAK3i	Inflammatory intestinal diseases	[Progress bar through Research, Phase 1]						Janssen
	New Programs	Multiple	[Progress bar through Research]						Wholly-owned
	Ampreloxetine (TD-9855) NRI	Symptomatic nOH	[Progress bar through Research, Phase 1, Phase 2, Phase 3]						Wholly-owned

	Program	Indication	Research	Phase 1	Phase 2	Phase 3	Filed	Marketed	Rights
Economic interests	TRELEGY ELLIPTA FF/UMEC/VI	COPD	[Progress bar through Research, Phase 1, Phase 2, Phase 3]					Marketed	GSK & Innoviva, Inc.
		Asthma	[Progress bar through Research, Phase 1, Phase 2, Phase 3]					Filed	
	VIBATIV® (telavancin)	cSSSI, HABP/VABP, concurrent bacteremia	[Progress bar through Research, Phase 1, Phase 2, Phase 3]					Marketed	Cumberland Pharmaceuticals
	Velusetrag (TD-5108)	Gastroparesis	[Progress bar through Research, Phase 1, Phase 2]						Alfasigma
	TD-8954 (TAK-954)	POGD IV	[Progress bar through Research, Phase 1, Phase 2]						Takeda
	Skin-selective JAKi	Dermatological diseases	[Progress bar through Research]						Pfizer

**Glossary of Defined Terms used in Table Above:**

- COPD:** Chronic Obstructive Pulmonary Disease;
- CD:** Crohn's Disease
- cSSSI:** Complicated Skin and Skin Structure Infections;
- FF:** Fluticasone Furoate;
- HABP/VABP:** Hospital-Acquired and Ventilator-Associated Bacterial Pneumonia;
- IV:** Intravenous;
- JAKi:** Janus Kinase Inhibitor;
- LAMA:** Long-Acting Muscarinic Antagonist;
- nOH:** Neurogenic Orthostatic Hypotension;
- NRI:** Norepinephrine Reuptake Inhibitor;
- POGD:** Post-Operative Gastrointestinal Dysfunction;
- UC:** Ulcerative Colitis;
- UMEC:** Umeclidinium; and
- VI:** Vilanterol

## Recent Developments

*Estimates as of December 31, 2019*

We are currently finalizing our financial results for the year ended December 31, 2019. The financial results discussed below as of December 31, 2019 are preliminary and subject to completion of financial and operating closing procedures. The results below are not a comprehensive statement of our financial results as of December 31, 2019, and our actual results may differ materially from these amounts following the completion of our financial and operating closing procedures, or as a result of other adjustments or developments that may arise before the results as of December 31, 2019 are finalized. In addition, even if our actual results are consistent with these preliminary results, those results or developments may not be indicative of results or developments in subsequent periods.

We expect to report that our cash, cash equivalents and marketable securities were approximately \$285.8 million as of December 31, 2019.

### *Global License Agreement with Pfizer Inc. for Skin-Selective Pan-JAK Inhibitors*

In the fourth quarter of 2019, we entered into a global license agreement with Pfizer Inc. for our preclinical skin-selective, locally-acting pan-JAK inhibitor program. The compounds in this program are designed to be rapidly metabolized, target validated pro-inflammatory pathways, and are specifically designed to possess skin-selective activity with minimal systemic exposure.

Under this agreement, Pfizer has an exclusive license to develop, manufacture and commercialize certain compounds for all uses other than gastrointestinal, ophthalmic and respiratory applications. We received an upfront cash payment of \$10.0 million and are eligible to receive up to an additional \$240.0 million in development and sales milestone payments from Pfizer. In addition, we will be eligible to receive a tiered marginal royalty on worldwide net sales of any potential products under the license at percentage royalty rates ranging from middle single-digits to low double-digits.

### *Theravance Respiratory Company, LLC ("TRC")*

In January 2020, we were informed by Innoviva that GSK had declined to adopt certain TRELEGY ELLIPTA development and commercialization initiatives proposed by Innoviva. As a result, Innoviva would not continue to withhold any funds that had been reserved for those initiatives, and we subsequently received \$15.8 million in a distribution from Innoviva representing our share of the net royalty income payments for the third quarter of 2019 plus the \$6.9 million previously withheld, less estimated TRC expenses for the quarter ended December 31, 2019 and estimated expenses through 2020. For additional discussion regarding risks related to royalty distributions by Innoviva and TRC, please see the risk factor entitled "*We do not control the commercialization of TRELEGY ELLIPTA and we do not control TRC; accordingly the amount of royalties we receive will depend, among other factors, on GSK's ability to further commercialize TRELEGY ELLIPTA and TRC's decisions concerning use of cash in accordance with the TRC LLC Agreement.*"

### *Note Refinancing*

We have in the past and are currently engaged in discussions with a limited number of investors to explore alternative financing strategies with respect to the Non-Recourse 2033 Notes. In particular, although we have no definitive agreements with respect to the refinancing of the Non-Recourse 2033 Notes, we are in advanced negotiations and it is possible that we could enter into definitive agreements with new lenders to, among other things, lend us \$400.0 million on a non-recourse basis similar to the Non-Recourse 2033 Notes and allow us to redeem the \$250.0 million aggregate principal amount of Non-Recourse 2033 Notes. We would expect this new loan to bear interest at a slightly higher rate than the Non-Recourse 2033 Notes and have a term of at least 15 years. We also expect that the primary source of funds to make payments on this new loan will continue to be the 63.75% economic interest of our affiliate in any future royalties due on net sales of the TRELEGY ELLIPTA program. We cannot assure you that we will be successful in negotiating this or any new loan agreement, that we will be able to refinance the Non-Recourse 2033 Notes and secure additional financing, or the timing or terms of any such financing.

**Corporate Information**

Theravance Biopharma was incorporated in the Cayman Islands in July 2013 under the name Theravance Biopharma, Inc. Our corporate address in the Cayman Islands and principal executive office is P.O. Box 309, Uglan House, Grand Cayman, KY1-1104, Cayman Islands and the address of our wholly-owned US operating subsidiary Theravance Biopharma US, Inc. is 901 Gateway Boulevard, South San Francisco, California 94080. Our telephone number is (650) 808-6000 and our corporate website address is [www.theravance.com](http://www.theravance.com). Information contained on or accessible through our website is not a part of this prospectus, and the inclusion of our website address in this prospectus is an inactive textual reference only. While Theravance Biopharma is incorporated under Cayman Islands law, Theravance Biopharma became an Irish tax resident effective July 1, 2015. The address of our wholly-owned Irish operating subsidiary, Theravance Biopharma Ireland Limited, is Connaught House, Burlington Road, Dublin 4, Ireland.

## RISK FACTORS

*Investing in our ordinary shares involves a high degree of risk. Before deciding whether to invest in our ordinary shares, you should consider carefully the risks discussed in this prospectus supplement and in any free writing prospectus that we have authorized for use in connection with this offering, which may be amended, supplemented or superseded by other reports we subsequently file with the SEC and that are incorporated by reference herein. If any of these risks actually occur, it may materially harm our business, financial condition, operating results or cash flow. As a result, the market price of our ordinary shares could decline, and you could lose all or part of your investment. Additional risks and uncertainties that are not yet identified or that we think are immaterial may also materially harm our business, operating results and financial condition and could result in a complete loss of your investment. Please also read carefully the section entitled "Cautionary Note Regarding Forward-Looking Statements."*

### RISKS RELATING TO THE COMPANY

***We anticipate that we will incur losses for the foreseeable future. We may never achieve or sustain profitability.***

First as part of Innoviva, Inc., and since June 2, 2014 as Theravance Biopharma, we have been engaged in discovery and development of compounds and product candidates since mid-1997. We may never generate sufficient revenue from the sale of medicines, royalties on sales by our partners or from our interest in Theravance Respiratory Company, LLC ("TRC") to achieve profitability. During the three and nine months ended September 30, 2019 and years ended December 31, 2018 and 2017, we recognized net losses of \$58.4 million, \$170.8 million, \$215.5 million and \$285.4 million, respectively, which are reflected in the shareholders' (deficit) equity on our consolidated balance sheets. We reflect cumulative net loss incurred after June 2, 2014, the effective date of our spin-off from Innoviva, Inc. (the "Spin-Off"), as accumulated deficit on our consolidated balance sheets, which was \$1.2 billion as of September 30, 2019. We expect to continue to incur net losses at least over the next several years as we continue our drug discovery and development efforts and incur significant preclinical and clinical development costs related to our current product candidates and commercialization and development costs relating to YUPELRI. In particular, to the extent we continue to advance our product candidates into and through additional clinical studies, we will incur substantial expenses. For example: we initiated a Phase 2b/3 induction and maintenance study of TD-1473 in ulcerative colitis; we initiated a Phase 2 induction study of TD-1473 in Crohn's disease; and we have progressed ampreloxetine (TD-9855) into a Phase 3 registrational program. The expenses associated with these clinical studies are substantial. We will incur costs and expenses associated with our co-promotion agreement with Mylan for commercialization of YUPELRI in the US, including the maintenance of an independent sales and marketing organization with appropriate technical expertise, a medical affairs presence and consultant support, and post-marketing studies. Our commitment of resources to the continued development of our existing product candidates, our discovery programs, and YUPELRI will require significant additional funding. Our operating expenses also will increase if, among other things:

- our earlier stage potential products move into later-stage clinical development, which is generally more expensive than early stage development;
- additional preclinical product candidates are selected for clinical development;
- we pursue clinical development of our potential or current products in new indications;
- we increase the number of patents we are prosecuting or otherwise expend additional resources on patent prosecution or defense; or
- we acquire or in-license additional technologies, product candidates, products or businesses.

While we are generating revenues from (i) sales of YUPELRI, (ii) our economic interest in royalties from net sales of TRELEGY ELLIPTA paid to TRC (63.75% of which amounts are used to make payments on the Non-Recourse 2033 Notes), (iii) payments under collaboration agreements, and (iv) minor royalties from the net sales of VIBATIV, we do not expect to generate significant revenues or become profitable in the immediate future. Since we or our collaborators or licensees may not successfully develop additional products, obtain required regulatory approvals, manufacture products at an acceptable cost or with appropriate quality, or successfully market and sell such products with desired margins, our expenses will continue to exceed any revenues we may receive for the foreseeable future.

In the absence of substantial licensing payments, contingent payments or other revenues from third-party collaborators, royalties on sales of products licensed under our intellectual property rights, future revenues from those product candidates in development that receive regulatory approval or other sources of revenues, we will continue to incur operating losses and will require additional capital to execute our business strategy. The likelihood of reaching, and the time required to reach, and then to sustain, profitability are highly uncertain. As a result, we expect to continue to incur substantial losses for the foreseeable future. We are uncertain when or if we will ever be able to achieve or sustain profitability. Failure to become and remain profitable would adversely affect the price of our securities and our ability to raise capital and continue operations.

***Any delay in commencing or completing clinical studies for product candidates and any adverse results from clinical or non-clinical studies or regulatory obstacles product candidates may face, would harm our business and the price of our securities could fall.***

Each of our product candidates must undergo extensive non-clinical and clinical studies as a condition to regulatory approval. Non-clinical and clinical studies are expensive, take many years to complete and study results may lead to delays in further studies, new requirements for conducting future studies or decisions to terminate programs. The commencement and completion of clinical studies for our product candidates may be delayed and programs may be terminated due to many factors, including, but not limited to:

- lack of effectiveness of product candidates during clinical studies;
- adverse events, safety issues or side effects (or perceived adverse developments or results) relating to the product candidates or their formulation into medicines;
- inability to raise additional capital in sufficient amounts to continue our development programs, which are very expensive;
- inability to enter into partnering arrangements relating to the development and commercialization of our programs and product candidates;
- delays in patient enrollment and variability in the number and types of patients available for clinical studies;
- the need to sequence clinical studies as opposed to conducting them concomitantly in order to conserve resources;
- our inability or the inability of our collaborators or licensees to manufacture or obtain from third parties materials sufficient for use in non-clinical and clinical studies;
- governmental or regulatory delays or suspensions of the conduct of the clinical trials and changes in regulatory requirements, policy and guidelines, including as a result of any class-based risks that emerge as an area of FDA or other regulatory agency focus;
- failure of our partners to advance our product candidates through clinical development;
- difficulty in maintaining contact with patients after treatment, resulting in incomplete data;

- varying regulatory requirements or interpretations of data among the FDA and foreign regulatory authorities; and
- a regional disturbance where we or our collaborative partners are enrolling patients in clinical trials, such as a pandemic, terrorist activities or war, political unrest or a natural disaster.

Any adverse developments or results or perceived adverse developments or results with respect to our clinical programs including, without limitation, any delays in development in our programs, any halting of development in our programs, any difficulties or delays encountered with regard to the FDA or other third country regulatory authorities with respect to our programs, or any indication from clinical or non-clinical studies that the compounds in our programs are not safe or efficacious, could have a material adverse effect on our business and cause the price of our securities to fall.

In July 2019, the FDA issued a Boxed Warning for a systemically active pan-JAK inhibitor, calling out an increased risk of pulmonary embolism and death following the results of a safety study in patients with rheumatoid arthritis. Theravance Biopharma is focused on developing pan-JAK inhibitors that are designed to remain organ- selective so that they do not become systemically active in order to minimize the risk of side effects. It is unknown at this time what, if any, additional requirements the FDA may put in place with respect to the development of JAK inhibitors generally or what other future FDA actions may have on the prospects for JAK inhibitors. Delays or adverse developments or results or perceived adverse developments or results relating to JAK inhibitors could harm our business and could cause the price of our securities to fall. Examples of such adverse developments include, but are not limited to:

- the FDA and/or other regulatory authorities determining that additional non-clinical or clinical studies are required with respect to our JAK inhibitor programs;
- safety, efficacy or other concerns relating to our JAK inhibitor programs or JAK inhibitors under development or commercialized by other companies;
- the FDA determining that class-based warnings are required for JAK inhibitors generally; or
- any change in FDA policy or guidance regarding JAK inhibitors.

***If our product candidates are not approved by regulatory authorities, including the FDA, we will be unable to commercialize them.***

The FDA must approve any new medicine before it can be marketed and sold in the US. We will not obtain this approval for a product candidate unless and until the FDA approves an NDA. We, or our collaborative partners, must provide the FDA and similar foreign regulatory authorities with data from preclinical and clinical studies that demonstrate that our product candidates comply with the regulatory requirements for the quality of medicinal products and are safe and effective for a defined indication before they can be approved for commercial distribution. FDA or foreign regulatory authorities may disagree with our trial design and our interpretation of data from preclinical studies and clinical trials. The processes by which regulatory approvals are obtained from the FDA and foreign regulatory authorities to market and sell a new product are complex, require a number of years, depend upon the type, complexity and novelty of the product candidate and involve the expenditure of substantial resources for research, development and testing. The FDA has substantial discretion in the drug approval process and may require us to conduct additional nonclinical and clinical testing or to perform post-marketing studies. Further, the implementation of new laws and regulations, and revisions to FDA clinical trial design guidance may lead to increased uncertainty regarding the approvability of new drugs. See the risk factor entitled "*Any delay in commencing or completing clinical studies for product candidates and any adverse results from clinical or non-clinical studies or regulatory obstacles product candidates may face, would harm our business and the price of our securities could fall*" above for additional information. In addition, the FDA has additional standards for approval of new drugs, including recommended advisory committee meetings for certain new molecular entities, and formal risk evaluation and mitigation requirements at the FDA's discretion. Even if we receive regulatory approval of a product, the approval may limit the indicated uses for which the drug may be marketed or impose significant restrictions or limitations on the use and/or distribution of such product.

In addition, in order to market our medicines in foreign jurisdictions, we or our collaborative partners must obtain separate regulatory approvals in each country. The approval procedure varies among countries and can involve additional testing, and the time required to obtain approval may differ from that required to obtain FDA approval. Approval by the FDA does not ensure approval by regulatory authorities in other countries, and approval by one foreign regulatory authority does not ensure approval by regulatory authorities in other foreign countries or by the FDA. Conversely, failure to obtain approval in one or more jurisdictions may make approval in other jurisdictions more difficult. These laws, regulations, additional requirements and changes in interpretation could cause non-approval or further delays in the FDA's or other regulatory authorities' review and approval of our and our collaborative partner's product candidates, which would materially harm our business and financial condition and could cause the price of our securities to fall.

***If additional capital is not available, we may have to curtail operations or we could be forced to share our rights to commercialize our product candidates with third parties on terms that may not be favorable to us.***

Based on our current operating plans and financial forecasts, we believe that our existing cash, cash equivalents and marketable securities will be sufficient to meet our anticipated operating needs for at least the next twelve months. However, our current operating plans or financial forecasts occasionally change. For example, in August 2017, we announced an increase in our anticipated operating loss for 2017, primarily driven by our decision to accelerate funding associated with the next phase of development of TD-1473 in our JAK inhibitor program. If our current operating plans or financial forecasts change, we may require or seek additional funding sooner in the form of public or private equity or equity-linked offerings, debt financings or additional collaborations and licensing arrangements.

We may need to raise additional capital in the future to, among other things:

- fund our discovery efforts and research and development programs;
- fund our commercialization strategies for any approved products and to prepare for potential product approvals;
- support our independent sales and marketing organization and medical affairs team;
- support our additional investments in YUPELRI, including potential post-marketing clinical studies;
- progress any additional product candidates into later-stage development without funding from a collaboration partner;
- progress mid-to-late stage product candidates into later-stage development, if warranted;
- respond to competitive pressures; and
- acquire complementary businesses or technologies.

Our future capital needs depend on many factors, including:

- the scope, duration and expenditures associated with our discovery efforts and research and development programs;
- continued scientific progress in these programs;

- the extent to which we encounter technical obstacles in our research and development programs;
- the outcome of potential licensing or partnering transactions, if any;
- competing technological developments;
- the extent of our proprietary patent position in any approved products and our product candidates;
- our facilities expenses, which will vary depending on the time and terms of any facility lease or sublease we may enter into, and other operating expenses;
- the scope and extent of the expansion of our sales and marketing efforts;
- potential litigation and other contingencies; and
- the regulatory approval process for our product candidates.

We intend to seek to raise additional capital or obtain future funding through public or private equity offerings, debt financings or additional collaborations and licensing arrangements to meet our capital needs or to take advantage of opportunistic market conditions. We may not be able to obtain additional financing on terms favorable to us, if at all. General market conditions may make it difficult for us to seek financing from the capital markets. We may be required to relinquish rights to our technologies, product candidates or territories, or grant licenses on terms that are not favorable to us, in order to raise additional funds through collaborations or licensing arrangements. We may sequence preclinical and clinical studies as opposed to conducting them concomitantly in order to conserve resources, or delay, reduce or eliminate one or more of our research or development programs and reduce overall overhead expenses. If we are unable to raise additional capital or obtain future funding in sufficient amounts or on terms acceptable to us, we may have to make reductions in our workforce and may be prevented from continuing our discovery, development and commercialization efforts and exploiting other corporate opportunities. This would likely harm our business, prospects and financial condition and cause the price of our securities to fall.

***We may seek to obtain future financing through the issuance of debt or equity, which may have an adverse effect on our shareholders or may otherwise adversely affect our business.***

If we raise funds through the issuance of additional debt, including convertible debt or debt secured by some or all of our assets, or equity, any debt securities or preferred shares issued will have rights, preferences and privileges senior to those of holders of our ordinary shares in the event of liquidation. Neither the terms of our \$230.0 million of 3.25% convertible senior notes, due 2023 (the "Convertible Senior 2023 Notes") nor the terms of the Issuer's 9.0% non-recourse notes due in or before 2033 ("Non-Recourse 2033 Notes") restrict our ability to issue additional debt. If additional debt is issued or we otherwise borrow additional funds, there is a possibility that once all senior claims are settled, there may be no assets remaining to pay out to the holders of ordinary shares. As referenced in "Summary—Note Refinancing" above, we are in advanced negotiations with new lenders for financing that would have the net effect of increasing our outstanding debt by \$150 million if our negotiations are successful. Moreover, 75% of the income from our investment in TRC, as evidenced by the Issuer Class C Units, is available only for payment of the Non-Recourse 2033 Notes and is not available to pay our other obligations or the claims of our other creditors. In addition, if we raise funds through the issuance of additional equity, whether through private placements or public offerings (including through the sales agreement we entered into in December 2019), such an issuance would dilute ownership of our current shareholders that do not participate in the issuance. Since our Spin-Off in June 2014, we have raised an aggregate of \$833.9 million in a combination of (i) the sale of approximately 17.5 million ordinary shares, and (ii) \$480.0 million aggregate principal amount of notes. If we are unable to obtain any needed additional funding, we may be required to reduce the scope of, delay, or eliminate some or all of, our planned research, development and commercialization activities or to license to third parties the rights to develop and/or commercialize products or technologies that we would otherwise seek to develop and/or commercialize ourselves or on terms that are less attractive than they might otherwise be, any of which could materially harm our business.

Furthermore, the terms of any additional debt securities we may issue in the future may impose restrictions on our operations, which may include limiting our ability to incur additional indebtedness, pay dividends on or repurchase our share capital, or make certain acquisitions or investments. In addition, we may be subject to covenants requiring us to satisfy certain financial tests and ratios, and our ability to satisfy such covenants may be affected by events outside of our control.

***If our partners do not satisfy their obligations under our agreements with them, or if they terminate our partnerships with them, we may not be able to develop or commercialize our partnered product candidates as planned.***

We have an exclusive development and commercialization agreement with Alfasigma for velusetrag, our internally discovered 5-HT4 agonist for the treatment of gastromotility disorders, under which we have transferred to Alfasigma global rights for velusetrag. In January 2015, we entered into a collaboration agreement with Mylan for the development and commercialization of a nebulized formulation of our LAMA revefenacin, including YUPELRI. Under the terms of the agreement, we and Mylan will co-develop nebulized revefenacin, including YUPELRI, for COPD and other respiratory diseases. In June 2016, we entered into a License and Collaboration Agreement with Millennium Pharmaceuticals, Inc., an indirect wholly-owned subsidiary of Takeda Pharmaceutical Company Limited (collectively with Millennium, "Takeda") in order to establish a collaboration for the development and commercialization of TD-8954, a selective 5-HT4 receptor agonist in development for gastrointestinal motility disorders. Under the terms of the agreement, Takeda is responsible for worldwide development and commercialization of TD-8954. In February 2018, we announced a global co-development and commercialization agreement with Janssen for TD-1473 and related back-up compounds for inflammatory intestinal diseases, including ulcerative colitis and Crohn's disease. In December 2019, we entered into a License Agreement with Pfizer Inc. ("Pfizer"). Under the license agreement, we provide Pfizer with an exclusive global license to develop, manufacture and commercialize compounds from our preclinical program for skin-targeted, locally-acting pan-Janus kinase (JAK) inhibitors that can be rapidly metabolized. In connection with these agreements, these parties have certain rights regarding the use of patents and technology with respect to the compounds in our development programs, including development and marketing rights.

Our partners have in the past and may in the future not fulfill all of their obligations under these agreements, and, in certain circumstances, they or we may terminate our partnership with them. In either event, we may be unable to assume the development and commercialization responsibilities covered by the agreements or enter into alternative arrangements with a third-party to develop and commercialize such product candidates. If a partner elected to promote alternative products and product candidates such as its own products and product candidates in preference to those licensed from us, does not devote an adequate amount of time and resources to our product candidates or is otherwise unsuccessful in its efforts with respect to our products or product candidates, the development and commercialization of product candidates covered by the agreements could be delayed or terminated, and future payments to us could be delayed, reduced or eliminated and our business and financial condition could be materially and adversely affected. Accordingly, our ability to receive any revenue from the product candidates covered by these agreements is dependent on the efforts of our partners. If a partner terminates or breaches its agreements with us, otherwise fails to complete its obligations in a timely manner or alleges that we have breached our contractual obligations under these agreements, the chances of successfully developing or commercializing product candidates under the collaboration could be materially and adversely affected. In addition, effective collaboration with a partner requires coordination to achieve complex and detail-intensive goals between entities that potentially have different priorities, capabilities and processes and successful navigation of the challenges such coordination entails. We could also become involved in disputes with a partner, which could lead to delays in or termination of our development and commercialization programs and time-consuming and expensive litigation or arbitration. Furthermore, termination of an agreement by a partner could have an adverse effect on the price of our ordinary shares or other securities even if not material to our business.

***We do not control TRC and, in particular, have no control over the GSK-Partnered Respiratory Programs or access to non-public information regarding the development of the GSK-Partnered Respiratory Programs.***

Innoviva has assigned to TRC its strategic alliance agreement with GSK and all of its rights and obligations under its LABA collaboration agreement other than with respect to RELVAR® ELLIPTA®/BREO® ELLIPTA®, ANORO® ELLIPTA® and vilanterol monotherapy. Our equity interest in TRC entitles us to an 85% economic interest in any future payments made by GSK under the strategic alliance agreement and under the portion of the collaboration agreement assigned to TRC (the "GSK Agreements") (net of TRC expenses paid and the amount of cash, if any, expected to be used by TRC pursuant to the TRC LLC Agreement over the next four fiscal quarters), which agreements govern Innoviva's and GSK's respective interests in the GSK-Partnered Respiratory Programs. Our equity interest covers various drug programs including in particular all TRELEGY ELLIPTA (the combination of fluticasone furoate, umeclidinium, and vilanterol in a single ELLIPTA® inhaler, previously referred to as the Closed Triple) products. Our economic interest does not include any payments by GSK associated with RELVAR® ELLIPTA®/BREO® ELLIPTA®, ANORO® ELLIPTA® or vilanterol monotherapy. Innoviva controls TRC and, except for certain limited consent rights, we have no right to participate in the business and affairs of TRC. Innoviva has the exclusive right to appoint TRC's manager who, among other things, is responsible for the day-to-day management of the GSK-Partnered Respiratory Programs and exercises the rights relating to the GSK-Partnered Respiratory Programs. As a result, we have no rights to participate in, or access to non-public information about, the development and commercialization work GSK and Innoviva are undertaking with respect to the GSK-Partnered Respiratory Programs and no right to enforce rights under the GSK Agreements assigned to TRC. Moreover, we have many of the same risks with respect to our and TRC's dependence on GSK as we have with respect to our dependence on our own partners.

***If there are any adverse developments or perceived adverse developments with respect to the GSK-Partnered Respiratory Programs in which we have a substantial economic interest, including TRELEGY ELLIPTA, our business will be harmed, and the price of our securities could fall.***

We have no access to non-public information regarding the development progress of, or plans for, the GSK-Partnered Respiratory Programs, including TRELEGY ELLIPTA, and we have little, if any, ability to influence the progress of those programs because our interest in these programs is only through our ownership interest in TRC, which is controlled by Innoviva. However, if any of the GSK-Partnered Respiratory Programs in which we have a substantial economic interest encounter delays, do not demonstrate required quality, safety and efficacy, are terminated, or if there are any adverse developments or perceived adverse developments with respect to such programs, our business will be harmed, and the price of our securities could fall. Examples of such adverse developments include, but are not limited to:

- disappointing or lower than expected sales of TRELEGY ELLIPTA;
- any regulatory difficulty in seeking approval of an asthma indication for TRELEGY ELLIPTA, which GSK is undertaking following its successful Phase 3 clinical program in asthma patients;

- disputes between GSK and Innoviva or between us and Innoviva, such as our recent dispute with Innoviva concerning the withholding of royalty payments due to us under the TRC LLC Agreement;
- the emergence of new closed triple or other alternative therapies or any developments regarding these potentially competitive therapies, comparative price or efficacy of such potentially competitive therapies;
- GSK deciding to delay or halt any of the GSK-Partnered Respiratory Programs in which we have a substantial economic interest;
- the FDA and/or other national or foreign regulatory authorities determining that any of the studies under these programs do not demonstrate the required quality, safety or efficacy, or that additional non-clinical or clinical studies are required with respect to such programs;
- any safety, efficacy or other concerns regarding any of the GSK-Partnered Respiratory Programs in which we have a substantial economic interest; or
- any particular FDA requirements or changes in FDA policy or guidance regarding these programs or any particular regulatory requirements in other jurisdictions or changes in the policies or guidance adopted by foreign regulatory authorities.

***Because GSK is a strategic partner of Innoviva, a strategic partner of TRC and a significant shareholder of us, it may take actions that in certain cases are materially harmful to our business and to our other shareholders.***

Based on our review of publicly available filings, as of December 31, 2019, we believe GSK beneficially owned approximately 16.9% of our outstanding ordinary shares. GSK is also a strategic partner to Innoviva with rights and obligations under the GSK Agreements, which include the strategic alliance agreement and the collaboration agreement assigned to TRC, that may cause GSK's interests to differ from our interests and those of our other shareholders. For example, GSK's commercialization efforts are guided by a portfolio approach across products in which we have an indirect interest through TRC and products in which we have no interest. Accordingly, GSK's commercialization efforts may have the effect of reducing the value of our interest in TRC. Furthermore, GSK has a substantial respiratory product portfolio in addition to the products covered by the GSK Agreements. GSK may make respiratory product portfolio decisions or statements about its portfolio which may be, or may be perceived to be, harmful to the respiratory products partnered with Innoviva and TRC. For example, GSK could promote its own respiratory products and/or delay or terminate the development or commercialization of the respiratory programs covered by the GSK Agreements. Also, given the potential future royalty payments GSK may be obligated to pay under the GSK Agreements, GSK may seek to acquire us or acquire our interests in TRC in order to effectively reduce those payment obligations and the price at which GSK might seek to acquire us may not reflect our true value. As a result of these differing interests, GSK may take actions that it believes are in its best interest but which might not be in the best interests of either us or our other shareholders. In addition, GSK could also seek to challenge our or Innoviva's post-Spin-Off operations as violating or allowing it to terminate the GSK Agreements, including by violating the confidentiality provisions of those agreements or the master agreement between GSK, Innoviva and us entered into in connection with the Spin-Off (the "Master Agreement"), or otherwise violating its legal rights. While we believe our operations fully comply with the GSK Agreements, the Master Agreement and applicable law, there can be no assurance that we or Innoviva will prevail against any such claims by GSK. Moreover, regardless of the merit of any claims by GSK, we may incur significant cost and diversion of resources in defending them. In addition, any other action or inaction by either GSK or Innoviva that results in a material dispute, allegation of breach, litigation, arbitration, or significant disagreement between those parties or between us and either of those parties may be interpreted negatively by the market or by our investors, could harm our business and cause the price of our securities to fall. Other examples of these kinds of issues include but are not limited to non-performance of other contractual obligations and allegations of non-performance, disagreements over the relative marketing and sales efforts for Innoviva's partnered products and other GSK respiratory products, disputes over public statements, and similar matters. In general, any uncertainty about the respiratory programs partnered with GSK, the enforceability of the GSK Agreements or the relationship/partnership between Innoviva and GSK or between us and Innoviva could result in significant reduction in the market price of our securities and other material harm to our business.

***We do not control the commercialization of TRELEGY ELLIPTA and we do not control TRC; accordingly the amount of royalties we receive will depend, among other factors, on GSK's ability to further commercialize TRELEGY ELLIPTA and TRC's decisions concerning use of cash in accordance with the TRC LLC Agreement.***

We only receive revenues from TRELEGY ELLIPTA based on the amount of sales of this product by GSK in the form of our economic interest in the royalties paid by GSK to TRC, which is managed by Innoviva. There are no required minimum future payments associated with the product and any royalties we receive will depend on GSK's ability to commercialize the product, the future payments, if any, made by GSK under the strategic alliance agreement and under the portion of the collaboration agreement assigned to TRC, TRC's expenses, and the amount of cash, if any, expected to be used by TRC pursuant to the TRC LLC Agreement. Following our recent arbitration with Innoviva concerning its withholding of certain royalty distributions to the TRC members, the arbitrator ruled that in the future if Innoviva desires to invest TRC funds in any initiatives that require the consent of GSK under the collaboration agreement, Innoviva must first obtain the consent of GSK. The timeframe for seeking GSK's consent for these initiatives and the associated dates by which GSK's consent must be received means that royalty distributions could be delayed for several quarters (if GSK ultimately does not consent) or perhaps not made at all until the completion of the initiatives (to the extent that GSK does consent and agrees with TRC that TRC funding will be used for such initiatives). This involves a number of risks and uncertainties, including:

- any future withholding by Innoviva or TRC of royalty distributions;
- GSK's ability to have an adequate supply of their respective product;
- ongoing compliance by GSK or its suppliers with the FDA's current Good Manufacturing Practice;
- compliance with other applicable FDA and other regulatory requirements in the US or other foreign jurisdictions, including those described elsewhere in this report;
- competition, whether from current competitors or new products developed by others in the future;
- claims relating to intellectual property;
- any future disruptions in GSK's business which would affect its ability to commercialize the product;
- the ability of TRELEGY ELLIPTA to achieve wider acceptance among physicians, patients, third-party payors, or the medical community in general;
- the amount of cash associated with any additional future TRELEGY ELLIPTA commercialization initiatives that Innoviva proposes to GSK for TRC to pursue, the time it may take to present those initiatives to GSK for approval and the time it takes for GSK to consent or not consent;
- global economic conditions; and
- any of the other risks relating to commercialization of products described elsewhere in this section.

These risks and uncertainties could materially impact the amount and timing of future royalties or other revenues we may receive from sales of TRELEGY ELLIPTA, which could have a material adverse effect on our future revenues, other financial results and our financial position and cause the price of our securities to fall.

In the future, Innoviva may cause TRC to withhold funds from distribution to its members, including our affiliates, for additional TRELEGY ELLIPTA development or commercialization initiatives that may be proposed, which would need to be approved by GSK in order to be implemented, or for other purposes. To the extent any TRELEGY ELLIPTA development or commercialization initiatives are timely approved by GSK and implemented, such initiatives may require funding beyond the amount withheld by TRC, and TRC may withhold additional amounts in subsequent quarters with respect to these initiatives. Accordingly, we cannot predict the amount of the funds that our affiliates would otherwise expect to receive from TRC that TRC may withhold in the future, or the timing of any such withholding.

We may object to the withholding of funds for additional proposed TRELEGY ELLIPTA initiatives or other purposes on the basis that such withholding is in violation of the terms of the LLC Agreement or otherwise, and such objection could result in additional legal proceedings between us, TRC and Innoviva. Any such legal proceedings could divert the attention of management and cause us to incur significant costs, regardless of the outcome, which we cannot predict. An adverse result could materially and adversely affect the funds that our affiliates would otherwise expect to receive from TRC in the future and thus have a material adverse effect on our business, financial condition, and results of operations.

***Our ongoing drug discovery and development efforts might not generate additional successful product candidates or approvable drugs.***

Our compounds in clinical trials and our future leads for potential drug compounds are subject to the risks and failures inherent in the development of pharmaceutical products. These risks include, but are not limited to, the inherent difficulty in selecting the right drug and drug target and avoiding unwanted side effects, as well as unanticipated problems relating to product development, testing, enrollment, obtaining regulatory approvals, maintaining regulatory compliance, manufacturing, competition and costs and expenses that may exceed current estimates.

Clinical studies involving our product candidates may reveal that those candidates are ineffective, inferior to existing approved medicines, unacceptably toxic, or that they have other unacceptable side effects. In addition, the results of preclinical studies do not necessarily predict clinical success, and larger and later-stage clinical studies may not produce the same results as earlier-stage clinical studies.

Frequently, product candidates that have shown promising results in early preclinical or clinical studies have subsequently suffered significant setbacks or failed in later non-clinical or clinical studies. In some instances, there can be significant variability in safety and/or efficacy results between different trials of the same product candidate due to numerous factors, including changes in trial protocols, differences in size and type of the patient populations, varying levels of adherence to the dosing regimen and other trial protocols and the rate of dropout among clinical trial participants. Clinical and non-clinical studies of product candidates often reveal that it is not possible or practical to continue development efforts for these product candidates. In addition, the design of a clinical trial can determine whether its results will support regulatory approval and flaws in the design of a clinical trial may not become apparent until the clinical trial is well underway or completed. If our clinical studies for our current product candidates, such as the clinical studies for our JAK inhibitor program or ampreloxtine in patients with nOH, are substantially delayed or suggest that any of our product candidates may not be efficacious or well tolerated, we could choose to cease development of these product candidates. In addition, our product candidates may have undesirable side effects or other unexpected characteristics that could cause us or regulatory authorities to interrupt, delay or halt clinical trials and could result in a more restricted label or the delay or denial of regulatory approval by regulatory authorities.

***We face substantial competition from companies with more resources and experience than we have, which may result in others discovering, developing, receiving approval for or commercializing products before or more successfully than we do.***

Our ability to succeed in the future depends on our ability to demonstrate and maintain a competitive advantage with respect to our approach to the discovery, development and commercialization of medicines. Our objective is to discover, develop and commercialize new small molecule medicines with superior efficacy, convenience, tolerability and/or safety using our proprietary insight in chemistry, biology and multivalency, where applicable. We expect that any medicines that we commercialize with or without our collaborative partners will compete with existing or future market-leading medicines.

Many of our current and potential competitors have substantially greater financial, technical and personnel resources than we have. In addition, many of these competitors have significantly greater commercial infrastructures than we have. Our ability to compete successfully will depend largely on our ability to leverage our experience in drug discovery and development, and, more recently, commercialization, to:

- discover and develop medicines that are superior to other products in the market;
- attract and retain qualified personnel;
- obtain and enforce patent and/or other proprietary protection for our medicines and technologies;
- conduct effective clinical trials and obtain required regulatory approvals;
- develop and effectively implement commercialization strategies, with or without collaborative partners; and
- successfully collaborate with pharmaceutical companies in the discovery, development and commercialization of new medicines.

Pharmaceutical companies, including companies with which we collaborate, may invest heavily to quickly discover and develop or in-license novel compounds that could make our product candidates obsolete. Accordingly, our competitors may succeed in obtaining patent protection, receiving FDA or equivalent regulatory approval outside the US or discovering, developing and commercializing medicines before we do. Other companies are engaged in the discovery of medicines that would compete with the product candidates that we are developing.

Any new medicine that competes with a generic or proprietary market leading medicine must demonstrate compelling advantages in efficacy, convenience, tolerability and/or safety in order to overcome severe price competition and be commercially successful. For example, YUPELRI competes predominantly with short-acting nebulized bronchodilators used three to four times per day and the nebulized LAMA Lonhala<sup>TM</sup> Magnair<sup>TM</sup> (SUN-101/eFlow®) used twice per day. If we are not able to compete effectively against our current and future competitors, our business will not grow, our financial condition and operations will suffer and the price of our securities could fall.

***If we are unable to enter into future collaboration arrangements or if any such collaborations with third parties are unsuccessful, we will be unable to fully develop and commercialize all of our product candidates and our business will be adversely affected.***

We have collaborations with a number of third parties including Janssen for TD-1473 and related back-up compounds for inflammatory intestinal diseases, including ulcerative colitis and Crohn's disease and Mylan for the development and commercialization of a nebulized formulation of revefenacin, our LAMA compound (including YUPELRI). Also, through our interest in TRC we may participate economically in Innoviva's collaborations with GSK with respect to the GSK-Partnered Respiratory Programs. Additional collaborations will likely be needed to fund later-stage development of certain programs that have not been licensed to a collaborator, such as our NEP inhibitor program and to commercialize the product candidates in our programs if approved by the necessary regulatory authorities. We evaluate commercial strategy on a product by product basis either to engage pharmaceutical or other healthcare companies with an existing sales and marketing organization and distribution system to market, sell and distribute our products or to commercialize a product ourselves. However, we may not be able to establish these sales and distribution relationships on acceptable terms, or at all, or may encounter difficulties in commercializing a product ourselves. For any of our product candidates that receive regulatory approval in the future and are not covered by our current collaboration agreements, we will need a partner in order to commercialize such products unless we establish independent sales, marketing and distribution capabilities with appropriate technical expertise and supporting infrastructure.

Collaborations with third parties regarding our programs may require us to relinquish material rights, including revenue from commercialization of our medicines, or to assume material ongoing development obligations that we would have to fund. These collaboration arrangements are complex and time-consuming to negotiate, and if we are unable to reach agreements with third-party collaborators, we may fail to meet our business objectives and our financial condition may be adversely affected. We face significant competition in seeking third-party collaborators. We may be unable to find third parties to pursue product collaborations on a timely basis or on acceptable terms. Furthermore, for any collaboration, we may not be able to control the amount of time and resources that our partners devote to our product candidates and our partners may choose to prioritize alternative programs or otherwise be unsuccessful in their efforts with respect to our products or product candidates. In addition, effective collaboration with a partner requires coordination to achieve complex and detail-intensive goals between entities that potentially have different priorities, capabilities and processes and successful navigation of the challenges such coordination entails. For example, Mylan has a substantial existing product portfolio and other considerations that influence its resource allocation, and other priorities and internal organizational processes that differ from our own. As a result of these differing interests and processes, Mylan may take actions that it believes are in its best interest but which might not be in the best interests of either us or our other shareholders. Our inability to successfully collaborate with third parties would increase our development costs and may cause us to choose not to continue development of certain product candidates, would limit the likelihood of successful commercialization of some of our product candidates, may cause us not to continue commercialization of our authorized products and could cause the price of our securities to fall.

***We depend on third parties in the conduct of our non-clinical and clinical studies for our product candidates.***

We depend on independent clinical investigators, contract research and manufacturing organizations and other third-party service providers in the conduct of our non-clinical and clinical studies for our product candidates. We rely heavily on these parties for execution of our non-clinical and clinical studies, and control only certain aspects of their activities. Nevertheless, we are responsible for ensuring that our clinical studies are conducted in accordance with good clinical, laboratory and manufacturing practices ("GxPs") and other regulations as required by the FDA and foreign regulatory authorities, and the applicable protocol. Failure by these parties to comply with applicable regulations and practices in conducting studies of our product candidates can result in a delay in our development programs or non-approval of our product candidates by regulatory authorities.

The FDA, and equivalent authorities in third countries, enforces GXP's and other regulations through periodic inspections of trial sponsors, clinical research organizations ("CROs"), principal investigators and trial sites. If we or any of the third parties on which we have relied to conduct our clinical studies are determined to have failed to comply with GXP's (or other equivalent regulations outside the US), the study protocol or applicable regulations, the clinical data generated in our studies may be deemed unreliable. This could result in non-approval of our product candidates by the FDA, or equivalent authorities in other countries, or we, the FDA, or equivalent authorities in other countries may decide to conduct additional audits or require additional clinical studies, which would delay our development programs, could result in significant additional costs and cause the price of our securities to fall.

***We rely on a single source of supply for a number of our product candidates, and our business will be harmed if any of these single-source manufacturers are not able to satisfy demand and alternative sources are not available.***

We have limited in-house production capabilities for preclinical and clinical study purposes, and depend primarily on a number of third-party Active Pharmaceutical Ingredient ("API") and drug product manufacturers. We may not have long-term agreements with these third parties and our agreements with these parties may be terminable at will by either party at any time. If, for any reason, these third parties are unable or unwilling to perform, or if their performance does not meet regulatory requirements, we may not be able to locate alternative manufacturers or enter into acceptable agreements with them. Any inability to acquire sufficient quantities of API and drug product in a timely manner from these third parties could delay preclinical and clinical studies and prevent us from developing our product candidates in a cost-effective manner or on a timely basis. In addition, manufacturers of our API and drug product are subject to the FDA's current Good Manufacturing Practice ("cGMP") regulations and similar foreign standards and we do not have control over compliance with these regulations by our manufacturers.

Our manufacturing strategy presents the following additional risks:

- because of the complex nature of many of our compounds, our manufacturers may not be able to successfully manufacture our APIs and/or drug products in a cost-effective and/or timely manner and changing manufacturers for our APIs or drug products could involve lengthy technology transfer, validation and regulatory qualification activities for the new manufacturer;
- the processes required to manufacture certain of our APIs and drug products are specialized and available only from a limited number of third-party manufacturers;
- some of the manufacturing processes for our APIs and drug products have not been scaled to quantities needed for continued clinical studies or commercial sales, and delays in scale-up to higher quantities could delay clinical studies, regulatory submissions and commercialization of our product candidates; and
- because some of the third-party manufacturers are located outside of the US, there may be difficulties in importing our APIs and drug products or their components into the US as a result of, among other things, FDA import inspections, incomplete or inaccurate import documentation or defective packaging.

***We have a significant amount of debt, including our Non-Recourse 2033 Notes and Convertible Senior 2033 Notes, that are senior in capital structure and cash flow, respectively, to holders of our ordinary shares. Satisfying the obligations relating to our debt could adversely affect the amount or timing of distributions to our shareholders.***

As of September 30, 2019, we had \$519.3 million in total long-term liabilities outstanding, comprised primarily of \$467.5 million in net principal that remains outstanding under the Issuer's Non-Recourse 2033 Notes and \$230.0 million in principal that remains outstanding under our Convertible Senior 2033 Notes (together with the Non-Recourse 2033 Notes, the "Notes").

The Convertible Senior 2033 Notes are unsecured debt and are not redeemable by us prior to the maturity date except for certain changes in tax law. Holders of the Convertible Senior 2033 Notes may require us to purchase all or any portion of their notes at 100% of their principal amount, plus any unpaid interest, upon a fundamental change such as a change of control of us or the termination of trading of our ordinary shares in accordance with the indenture governing the Convertible Senior 2033 Notes.

Until the Non-Recourse 2033 Notes are paid in full, holders of the Non-Recourse 2033 Notes have a perfected security interest in the Issuer Class C Units that represent a 63.75% economic interest in any future payments that may be made by GSK to TRC under the strategic alliance agreement and under the portion of the collaboration agreement assigned to TRC by Innoviva (net of TRC expenses paid and the amount of cash, if any, expected to be used in over the next four fiscal quarters) relating to the GSK-Partnered Respiratory Programs, including the TRELEGY ELLIPTA program.

Through October 15, 2020, the terms of the Non-Recourse 2033 Notes provide that to the extent there are insufficient funds to satisfy the Issuer's scheduled quarterly interest obligations, the shortfall shall be added to the principal amount of the Non-Recourse 2033 Notes without a default or event of default occurring. The terms of the Non-Recourse 2033 Notes also provide that, at Theravance Biopharma's option, the quarterly interest payment obligations can be satisfied by making a capital contribution to the Issuer, but not for more than four (4) consecutive quarterly interest payment dates or for more than six (6) quarterly interest payment dates during the term of the notes. For the April 15, 2019 and July 15, 2019 interest payment dates, Theravance Biopharma R&D, Inc. (parent entity of Issuer) made a capital contribution to satisfy the interest payment obligations for these two scheduled payments while we arbitrated the dispute with Innoviva.

Satisfying the obligations of these Notes could adversely affect the amount or timing of any distributions to our shareholders. We may choose to satisfy, repurchase, or refinance these Notes through public or private equity or debt financings if we deem such financings are available on favorable terms. We are currently engaged in discussions with a limited number of investors to explore alternative financing strategies with respect to the Non-Recourse 2033 Notes that may result in us borrowing additional funds. See "Summary—Note Refinancing" above for more information. If any or all of the Convertible Senior 2033 Notes are not converted into our ordinary shares before the maturity date, we will have to pay the holders the full aggregate principal amount of the Convertible Senior 2033 Notes then outstanding. If the Non-Recourse 2033 Notes are not refinanced or paid in full, the holders of the Non-Recourse 2033 Notes will have the right to foreclose on the Issuer Class C Units that represent a 63.75% economic interest in future royalties due on net sales of TRELEGY ELLIPTA and related assets. If the Issuer Class C Units are foreclosed upon, we will lose any right to receive 75% of the future royalty payments made by GSK in connection with the net sales of TRELEGY ELLIPTA and related assets. Any of the above payments could have a material adverse effect on our cash position. Our failure to satisfy these obligations may result in a default under the applicable indenture governing these Notes, which could result in a default under certain of our other debt instruments, if any. Any such default would harm our business and the price of our securities could fall.

***Servicing our Convertible Senior 2023 Notes requires a significant amount of cash, and we may not have sufficient cash flow from our business to pay our debt. Additionally, holders may require us to repurchase our Convertible Senior 2023 Notes under certain circumstances, and we may not have sufficient cash to do so.***

Our ability to make interest or principal payments when due or to refinance the Convertible Senior 2023 Notes depends on our future performance, which is subject to economic, financial, competitive and other factors beyond our control. Our business may not generate cash flow from operations sufficient to satisfy our obligations under the Convertible Senior 2023 Notes and any future indebtedness we may incur and to make necessary capital expenditures. In addition, the issuance of the Non-Recourse 2033 Notes reduced the cash available for us to make interest or principal payments on, or to refinance, the Convertible Senior 2023 Notes. We may be required to adopt one or more alternatives, such as reducing or delaying investments or capital expenditures, selling assets, refinancing or obtaining additional equity capital on terms that may be onerous or highly dilutive. Our ability to refinance the Convertible Senior 2023 Notes or future indebtedness will depend on the capital markets and our financial condition at such time. We may not be able to engage in any of these activities on desirable terms or at all, which could result in a default on the Convertible Senior 2023 Notes or future indebtedness.

The holders of the Convertible Senior 2023 Notes may have the right to require us to repurchase the Convertible Senior 2023 Notes upon the occurrence of a "fundamental change" such as a change of control of our Company or the termination of trading of our ordinary shares, as defined in the indenture governing the Convertible Senior 2023 Notes. We may not have sufficient funds to repurchase the Convertible Senior 2023 Notes in cash or have the ability to arrange necessary financing on acceptable terms. Our failure to repurchase the Convertible Senior 2023 Notes when required would result in an event of default with respect to the Convertible Senior 2023 Notes. In addition, any acceleration of the repayment of the Convertible Senior 2023 Notes or future indebtedness after any applicable notice or grace periods could have a material adverse effect on our business, results of operations and financial condition.

***Our business and operations would suffer in the event of significant disruptions of information technology systems or security breaches.***

We rely extensively on computer systems to maintain information and manage our finances and business. In the ordinary course of business, we collect, store and transmit large amounts of confidential information (including but not limited to trade secrets or other intellectual property, proprietary business information and personal information) and it is critical that we maintain the confidentiality and integrity of such confidential information. Although we have security measures in place, our internal information technology systems and those of our CROs and other service providers, including cloud-based and hosted applications, data and services, are vulnerable to service interruptions and security breaches from inadvertent or intentional actions by our employees, service providers and/or business partners, from cyber-attacks by malicious third parties, and/or from, natural disasters, terrorism, war and telecommunication and electrical failures. Cyber-attacks are increasing in their frequency, sophistication, and intensity, and have become increasingly difficult to detect. Significant disruptions of information technology systems or security breaches could adversely affect our business operations and result in financial, legal, business and reputational harm to us, including significant liability and/or significant disruption to our business. If a disruption of information technology systems or security breach results in a loss of or damage to our data or regulatory applications, unauthorized access, use, or disclosure of, or the prevention of access to, confidential information, or other harm to our business, we could incur liability and reputational harm, we could be required to comply with federal and/or state breach notification laws and foreign law equivalents, we may incur legal expenses to protect our confidential information, the further development of our product candidates could be delayed and the price of our securities could fall. For example, the loss of clinical trial data from completed or ongoing clinical trials of our product candidates could result in delays in our regulatory approval efforts and significantly increase our costs to recover or reproduce the data. As another example, we may incur penalties imposed by the competent authorities in the EU Member States in case of breach of the EU rules governing the collection and processing of personal data, including unauthorized access to or disclosure of personal data. Although we have security and fraud prevention measures in place, we have been subject to immaterial payment fraud activity. In 2017, we filed a lawsuit (which has since been resolved) against a former employee for misappropriation of our confidential, proprietary and trade secret information. Moreover, there can be no assurance that such security measures will prevent service interruptions or security breaches that could adversely affect our business.

***If we lose key management or scientific personnel, or if we fail to attract and retain key employees, our ability to discover and develop our product candidates and commercialize our products, if any, will be impaired.***

We are highly dependent on principal members of our management team and scientific staff, and in particular, our Chief Executive Officer, Rick E. Winningham, to operate our business. Mr. Winningham has significant pharmaceutical industry experience. The loss of Mr. Winningham's services could impair our ability to discover, develop and commercialize new medicines.

If we fail to retain our qualified personnel or replace them when they leave, we may be unable to continue our discovery, development and commercialization activities, which may cause the price of our securities to fall.

In addition, our US operating subsidiary's facility and most of its employees are located in northern California, headquarters to many other biotechnology and biopharmaceutical companies and many academic and research institutions. As a result, competition for certain skilled personnel in our market is intense. None of our employees have employment commitments for any fixed period of time and they all may leave our employment at will. If we fail to retain our qualified personnel or replace them when they leave, we may be unable to continue our development and commercialization activities and the price of our securities could fall.

***Global health and economic, political and social conditions may harm our ability to do business, increase our costs and negatively affect our stock price.***

Worldwide economic conditions remain uncertain due to the decision by the United Kingdom to initiate the formal procedure of withdrawal from the EU (often referred to as "Brexit"), current economic challenges in Asia, the coronavirus in China, and other disruptions to global and regional economies and markets.

Brexit has created significant uncertainty about the future relationship between the United Kingdom and the EU, including with respect to the laws and regulations that will apply as the United Kingdom determines which EU laws to replace or replicate in the event of a withdrawal. From a regulatory perspective, the United Kingdom's withdrawal could bear significant complexity and risks. In addition, the exact terms of the United Kingdom's withdrawal and the laws and regulations that will apply after the United Kingdom withdraws from the EU would affect manufacturing sites that hold an EU manufacturing authorization issued by the United Kingdom competent authorities.

In light of the fact that a significant portion of the regulatory framework in the UK is derived from EU laws, Brexit could materially impact the EU regulatory regime governing development, manufacture, importation, approval and commercialization of our product candidates in the UK or the EU. For example, there is a risk that the scope of a marketing authorization for a medicinal product granted by the European Commission or by the competent authorities of EU member states will not encompass the UK. In these circumstances, a separate authorization granted by the UK competent authorities will be required to place medicinal products on the UK market. In addition, our ability to rely on UK manufacturing sites to supply medicinal products intended for the EU market will depend on the terms of the UK's withdrawal from the EU and, potentially, on the ability to obtain relevant exemptions under EU law to supply the EU market with medicinal products manufactured at UK-certified sites. There is also a risk that if batch release and quality control testing sites for our products are located only in the UK, manufacturers will be required to use sites in other EU member states to manufacture products for supply to the EU market. All of these changes, if they occur, could increase our costs and otherwise adversely affect our business. In addition, currency exchange rates for the British Pound and the Euro with respect to each other and to the U.S. dollar have already been, and may be continue to be, negatively affected by Brexit, which could cause volatility in our quarterly financial results.

Further, development of our product candidates and/or regulatory approval may be delayed for other political events beyond our control. For example, a US federal government shutdown or budget sequestration, such as ones that occurred during 2013, 2018, and 2019, may result in significant reductions to the FDA's budget, employees and operations, which may lead to slower response times and longer review periods, potentially affecting our ability to progress development of our product candidates or obtain regulatory approval for our product candidates. Further, future government shutdowns could impact our ability to access the public markets and obtain necessary capital in order to properly capitalize and continue our operations.

Our operations also depend upon favorable trade relations between the US and those foreign countries in which our materials suppliers have operations. A protectionist trade environment in either the US or those foreign countries in which we do business, such as a change in the current tariff structures, export compliance or other trade policies, may materially and adversely affect our operations.

External factors, such as potential terrorist attacks, acts of war, geopolitical and social turmoil or epidemics and other similar outbreaks in many parts of the world, could also prevent or hinder our ability to do business, increase our costs and negatively affect our stock price. For example, concerns about the Coronavirus are having an adverse effect upon the Chinese economy and could adversely affect our business operations or the operations of our suppliers. Concerns about the Coronavirus may, for example, negatively affect the reliability and cost of transportation, negatively affect the desire and ability of our employees to travel, delay the enrollment of patients in our clinical trials by clinical trial sites located in impacted jurisdictions, disrupt the production capabilities of our suppliers (and, in particular, suppliers of drug product we need for the conduct of our clinical trials) adversely affect our ability to obtain adequate insurance at reasonable rates, and require us to take extra security precautions for our operations. These geopolitical, social and economic conditions could harm our business.

***Our US operating subsidiary's facility is located near known earthquake fault zones, and the occurrence of an earthquake, extremist attack or other catastrophic disaster could cause damage to our facilities and equipment, which could require us to cease or curtail operations.***

Our US operating subsidiary's facility is located in the San Francisco Bay Area near known earthquake fault zones and therefore will be vulnerable to damage from earthquakes. In October 1989, a major earthquake struck this area and caused significant property damage and a number of fatalities. We are also vulnerable to damage from other types of disasters, including power loss, attacks from extremist organizations, fire, floods, communications failures and similar events. If any disaster were to occur, our ability to operate our business could be seriously impaired. In addition, the unique nature of our research activities and of much of our equipment could make it difficult and costly for us to recover from this type of disaster. We may not have adequate insurance to cover our losses resulting from disasters or other similar significant business interruptions and we do not plan to purchase additional insurance to cover such losses due to the cost of obtaining such coverage. Any significant losses that are not recoverable under our insurance policies could seriously impair our business and financial condition, which could cause the price of our securities to fall.

***If YUPELRI does not continue to be accepted by physicians, patients, third-party payors, or the medical community in general, we may not receive significant additional revenues from sales of this product.***

The commercial success of YUPELRI depends upon its acceptance by physicians, patients, third-party payors and the medical community in general. YUPELRI may not be sufficiently accepted by these parties. YUPELRI competes with predominantly with short-acting nebulized bronchodilators used three to four times per day and the nebulized LAMA Lonhala™ Magnair™ (SUN-101/eFlow®) used twice per day. If YUPELRI's acceptance does not continue to grow, our business and financial results could be materially harmed.

***In collaboration with Mylan, we are responsible for marketing and sales of YUPELRI in the US, which subjects us to certain risks.***

We currently maintain a sales force in the US and plan to continue to augment our sales and marketing personnel to support our co-promotion obligations for YUPELRI under our agreement with Mylan. The risks of fulfilling our US co-promotion obligations to Mylan include:

- costs and expenses associated with maintaining an independent sales and marketing organization with appropriate technical expertise and supporting infrastructure, including third-party vendor logistics and consultant support, which costs and expenses could, depending on the scope and method of the marketing effort, exceed any product revenue for several years;
- our ability to retain effective sales and marketing personnel and medical science liaisons in the US;
- the ability of our sales and marketing personnel to obtain access to and educate adequate numbers of physicians about prescribing YUPELRI, in appropriate clinical situations; and
- the lack of complementary products to be offered by sales personnel, which may put us at a competitive disadvantage relative to companies with more extensive product lines.

If we are not successful in maintaining an internal sales and marketing organization with appropriate experience, technical expertise, supporting infrastructure and the ability to obtain access to and educate adequate numbers of physicians about prescribing YUPELRI in appropriate clinical situations, we will have difficulty commercializing YUPELRI, which would adversely affect our business and financial condition and the price of our securities could fall.

***We are subject to extensive and ongoing regulation, oversight and other requirements by the FDA and failure to comply with these regulations and requirements may subject us to penalties that may adversely affect our financial condition or our ability to commercialize any approved products.***

Prescription drug advertising and promotion are closely scrutinized by the FDA, including substantiation of promotional claims, disclosure of risks and safety information, and the use of themes and imagery in advertising and promotional materials. As with all companies selling and marketing products regulated by the FDA in the US, we are prohibited from promoting any uses of an approved product, such as YUPELRI, that are outside the scope of those uses that have been expressly approved by the FDA as safe and effective on the product's label.

The manufacturing, labeling, packaging, adverse event reporting, advertising, promotion and recordkeeping for an approved product remain subject to extensive and ongoing regulatory requirements. If we become aware of previously unknown problems with an approved product in the US or overseas or at a contract manufacturer's facilities, a regulatory authority may impose restrictions on the product, the contract manufacturers or on us, including requiring us to reformulate the product, conduct additional clinical studies, change the labeling of the product, withdraw the product from the market or require the contract manufacturer to implement changes to its facilities.

We are also subject to regulation by regional, national, state and local agencies, including the Department of Justice, the Federal Trade Commission, the Office of Inspector General of the US Department of Health and Human Services ("OIG") and other regulatory bodies with respect to any approved product, such as YUPELRI, as well as governmental authorities in those foreign countries in which any product is approved for commercialization. The Federal Food, Drug, and Cosmetic Act, the Public Health Service Act and other federal and state statutes and regulations govern to varying degrees the research, development, manufacturing and commercial activities relating to prescription pharmaceutical products, including non-clinical and clinical testing, approval, production, labeling, sale, distribution, import, export, post-market surveillance, advertising, dissemination of information and promotion. If we or any third parties that provide these services for us are unable to comply, we may be subject to regulatory or civil actions or penalties that could significantly and adversely affect our business.

Regulatory approval for our product candidates, if any, may include similar or other limitations on the indicated uses for which we can market our medicines or the patient population that may utilize our medicines, which may limit the market for our medicines or put us at a competitive disadvantage relative to alternative therapies.

Failure to satisfy required post-approval requirements and/or commitments may have implications for a product's approval and may carry civil monetary penalties. Any failure to maintain regulatory approval will materially limit the ability to commercialize a product or any future product candidates and if we fail to comply with FDA regulations and requirements, the FDA could potentially take a number of enforcement actions against us, including the issuance of untitled letters, warning letters, preventing the introduction or delivery of the product into interstate commerce in the US, misbranding charges, product seizures, injunctions, and civil monetary penalties, which would materially and adversely affect our business and financial condition and may cause the price of our securities to fall.

The risks identified in this risk factor relating to regulatory actions and oversight by agencies in the US and throughout the world also apply to the commercialization of any partnered products by our collaboration partners and those commercializing products with respect to which we have an economic interest or right to receive royalties, including GSK and Cumberland, and such regulatory actions and oversight may limit those parties' ability to commercialize such products, which could materially and adversely affect our business and financial condition, and which may cause the price of our securities to fall.

***We and/or our collaboration partners and those commercializing products with respect to which we have an economic interest or right to receive royalties may face competition from companies seeking to market generic versions of any approved products in which we have an interest, such as TRELEGY ELLIPTA or YUPELRI.***

Under the Drug Price Competition and Patent Term Restoration Act of 1984, a company may submit an abbreviated new drug application ("ANDA") under section 505(j) of the Federal Food, Drug, and Cosmetic Act to market a generic version of an approved drug. Because a generic applicant does not conduct its own clinical studies, but instead relies on the FDA's finding of safety and effectiveness for the approved drug, it is able to introduce a competing product into the market at a cost significantly below that of the original drug. Although we have multiple patents protecting YUPELRI until at least 2025 that are listed in the FDA's Approved Drug Products with Therapeutic Equivalence Evaluations, commonly known as the Orange Book, and those commercializing products with respect to which we have an economic interest or right to receive royalties similarly have patents protecting their products, such as TRELEGY ELLIPTA and VIBATIV, generic applicants could potentially submit "paragraph IV certifications" to FDA stating that such patents are invalid or will not be infringed by the applicant's product. We have not received any such paragraph IV notifications nor are we aware of any with respect to products in which we have an economic interest or right to receive royalties, but if any competitors successfully challenge the patents related to these products, we and/or our collaboration partners and those commercializing products with respect to which we have an economic interest or right to receive royalties would face substantial competition. If we are not able to compete effectively against such future competition, our business will not grow, our financial condition and operations will suffer and the price of our securities could fall.

For additional discussion of the risk of generic competition to YUPELRI, please see the following risk factor below *"If our efforts to protect the proprietary nature of the intellectual property related to our technologies are not adequate, we may not be able to compete effectively in our current or future markets."*

***We may be treated as a US corporation for US federal income tax purposes.***

For US federal income tax purposes, a corporation generally is considered tax resident in the place of its incorporation. Theravance Biopharma is incorporated under Cayman Islands law and established tax residency in Ireland effective July 1, 2015. Therefore, it should be a non-US corporation under this general rule. However, Section 7874 of the Internal Revenue Code of 1986, as amended (the "Code"), contains rules that may result in a foreign corporation being treated as a US corporation for US federal income tax purposes. The application of these rules is complex and there is little guidance regarding certain aspects of their application.

Under Section 7874 of the Code, a corporation created or organized outside the US will be treated as a US corporation for US federal tax purposes if (i) the foreign corporation directly or indirectly acquires substantially all of the properties held directly or indirectly by a US corporation, (ii) the former shareholders of the acquired US corporation hold at least 80% of the vote or value of the shares of the foreign acquiring corporation by reason of holding stock in the US acquired corporation, and (iii) the foreign corporation's "expanded affiliated group" does not have "substantial business activities" in the foreign corporation's country of incorporation relative to its expanded affiliated group's worldwide activities. For this purpose, "expanded affiliated group" generally means the foreign corporation and all subsidiaries in which the foreign corporation, directly or indirectly, owns more than 50% of the stock by vote and value, and "substantial business activities" generally means at least 25% of employees (by number and compensation), assets and gross income of our expanded affiliated group are based, located and derived, respectively, in the country of incorporation.

We do not expect to be treated as a US corporation under Section 7874 of the Code, because we do not believe that the assets contributed to us by Innoviva constituted "substantially all" of the properties of Innoviva (as determined on both a gross and net fair market value basis). However, the Internal Revenue Service may disagree with our conclusion on this point and assert that, in its view, the assets contributed to us by Innoviva did constitute "substantially all" of the properties of Innoviva. In addition, there could be legislative proposals to expand the scope of US corporate tax residence and there could be changes to Section 7874 of the Code or the Treasury Regulations promulgated thereunder that could apply retroactively and could result in Theravance Biopharma being treated as a US corporation.

If it were determined that we should be treated as a US corporation for US federal income tax purposes, we could be liable for substantial additional US federal income tax on our post-Spin-Off taxable income. In addition, though we have no current plans to pay any dividends, payments of any dividends to non-US holders may be subject to US withholding tax.

***Taxing authorities may challenge our structure and transfer pricing arrangements.***

We are incorporated in the Cayman Islands, maintain subsidiaries in the Cayman Islands, the US, the United Kingdom and Ireland, and effective July 1, 2015, we migrated our tax residency from the Cayman Islands to Ireland. Due to economic and political conditions, various countries are actively considering changes to existing tax laws. We cannot predict the form or timing of potential legislative changes that could have a material adverse impact on our results of operations. We are aware that Ireland has implemented certain tax law changes and is expected to implement additional tax law changes to comply with the European Union Anti-Tax Avoidance Directives. These changes include the first ever Irish controlled foreign company ("CFC") rules which came into effect on January 1, 2019. Due to provisions in *Finance Bill 2019*, Ireland will also implement certain transfer pricing rule changes, with effect from 2020. We are continuing to evaluate and monitor the applicability of the CFC rules published in *Finance Act 2018*, but our current assessment, based on the rules and guidance published to date, is that the rules are unlikely to have a material impact on our operations. Proposed statutory language has been provided for transfer pricing rule changes, and we believe that the transfer pricing rules are unlikely to have a material impact on our operations. New United Kingdom tax legislation was introduced by the *Finance Act 2019* ("FA 2019") that imposes a tax related to offshore receipts in respect of intangible property held in low tax jurisdictions ("ORIP") and became effective in April 2019. FA 2019 also included a power for amendments to the ORIP legislation to be made by regulation by December 31, 2019. On October 15, 2019, the United Kingdom published further guidance intended to facilitate the administration of the ORIP regime. However, a number of issues and areas of uncertainty remain. We have reviewed the original legislation in conjunction with the guidance and believe that the ORIP regime may apply to certain cash receipts. Based on this analysis, we believe that the ORIP charge on United Kingdom-derived cash receipts through the third quarter of 2019 is not material, but we will continue to refine our ORIP conclusions as guidance evolves.

In addition, significant judgment is required in determining our worldwide provision for income taxes. Various factors may have favorable or unfavorable effects on our income tax rate including, but not limited to the performance of certain functions and ownership of certain assets in tax-efficient jurisdictions such as the Cayman Islands and Ireland, together with intra-group transfer pricing agreements. Taxing authorities may challenge our structure and transfer pricing arrangements through an audit or lawsuit. Responding to or defending such a challenge could be expensive and consume time and other resources, and divert management's time and focus from operating our business. We cannot predict whether taxing authorities will conduct an audit or file a lawsuit challenging this structure, the cost involved in responding to any such audit or lawsuit, or the outcome. We may be required to pay taxes for prior periods, interest, fines or penalties, and may be obligated to pay increased taxes in the future which could result in reduced cash flows and have a material adverse effect on our business, financial condition and growth prospects.

***We were a passive foreign investment company, or "PFIC," for 2014, but we were not a PFIC from 2015 through 2019, and we do not expect to be a PFIC for the foreseeable future.***

For US federal income tax purposes, we generally would be classified as a PFIC for any taxable year if either (i) 75% or more of our gross income (including gross income of certain 25% or more owned corporate subsidiaries) is "passive income" (as defined for such purposes) or (ii) the average percentage of our assets (including the assets of certain 25% or more owned corporate subsidiaries) that produce passive income or that are held for the production of passive income is at least 50%. In addition, whether our company will be a PFIC for any taxable year depends on our assets and income over the course of each such taxable year and, as a result, cannot be predicted with certainty until after the end of the year.

Based upon our assets and income during the course of 2014, we believe that our company and one of our company's wholly-owned subsidiaries, Theravance Biopharma R&D, Inc. was a PFIC for 2014. Based upon our assets and income from 2015 through 2019, we do not believe that our company is a PFIC during these four years. We do not expect to be a PFIC for the foreseeable future based on our current business plans and current business model. For any taxable year (or portion thereof) in which our company is a PFIC that is included in the holding period of a US holder, the US holder is generally subject to additional US federal income taxes plus an interest charge with respect to certain distributions from Theravance Biopharma or gain recognized on a sale of Theravance Biopharma shares. Similar rules would apply with respect to distributions from or gain recognized on an indirect sale of Theravance Biopharma Ireland Limited. US holders of our ordinary shares may have filed an election with respect to Company shares held at any time during 2014 to be treated as owning an interest in a "qualified electing fund" ("QEF") or to "mark to market" their ordinary shares to avoid the otherwise applicable interest charge consequences of PFIC treatment with respect to our ordinary shares. A foreign corporation will not be treated as a QEF for any taxable year in which such foreign corporation is not treated as a PFIC. QEF and mark to market elections generally apply to the taxable year for which the election is made and all subsequent taxable years unless the election is revoked with consent of the Secretary of Treasury. US holders of our ordinary shares should consult their tax advisers regarding the tax reporting implications with respect to any QEF and mark to market elections made with respect to our company and with respect to their indirect interests in Theravance Biopharma R&D, Inc.

***If we are unable to maintain effective internal controls, our business, financial position and results of operations could be adversely affected.***

If we are unable to maintain effective internal controls, our business, financial position and results of operations could be adversely affected. We are subject to the reporting and other obligations under the Exchange Act, including the requirements of Section 404 of the Sarbanes-Oxley Act of 2002, which require annual management assessments of the effectiveness of our internal control over financial reporting. Our management is responsible for establishing and maintaining adequate internal control over financial reporting as defined in Rules 13a-15(f) under the Exchange Act. Our internal control over financial reporting is a process designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with accounting principles generally accepted in the US. Any failure to achieve and maintain effective internal controls could have an adverse effect on our business, financial position and results of operations. In addition, our independent registered public accounting firm is required to attest to the effectiveness of our internal control over financial reporting annually. If our independent registered public accounting firm is unable to attest to the effectiveness of our internal control over financial reporting, investor confidence in our reported results will be harmed and the price of our securities may fall. These reporting and other obligations place significant demands on our management and administrative and operational resources, including accounting resources.

***Agreements entered into with or for the benefit of GSK in connection with the Spin-Off may significantly restrict our business and affairs.***

On March 3, 2014, in connection with the Spin-Off, we, Innoviva and GSK entered into a number of agreements that may significantly restrict our business and affairs. In particular, we, Innoviva and GSK entered into the Master Agreement which, among other things, requires GSK's consent to make any changes to (i) a Separation and Distribution Agreement and ancillary agreements that would, individually or in the aggregate, reasonably be expected to adversely affect GSK in any material respect or (ii) the TRC LLC Agreement, which consent is not to be unreasonably withheld, conditioned or delayed, provided that GSK may withhold, condition or delay such consent in its sole discretion with respect to certain sections of the TRC LLC Agreement and any changes to the governance structure of TRC, the confidentiality restrictions, the consent rights, and the transfer restrictions in the TRC LLC Agreement. We and GSK also entered into (i) the Governance Agreement that expired on December 31, 2017, (ii) a registration rights agreement that gives GSK certain registration rights with respect to our ordinary shares held by GSK and (iii) an extension agreement that extends to us certain restrictive covenants similar to those applicable to Innoviva under the GSK Agreements. There can be no assurance that these restrictions will not materially harm our business, particularly given that GSK's interests may not be aligned with the interests of our business or our other shareholders.

***Certain of our directors and officers may have actual or potential conflicts of interest because of their equity ownership in Innoviva, which actual or potential conflicts may harm our business, prospects and financial condition and result in the diversion of corporate opportunities to Innoviva.***

Certain of our directors and officers hold shares of Innoviva's common stock or rights to acquire such shares, and these holdings may be significant for some of these individuals compared to their total assets. This ownership of Innoviva common stock by certain of our directors and officers may create, or may create the appearance of, conflicts of interest when these directors and officers are faced with decisions that could have different implications for Innoviva and for us. For example, potential or actual conflicts could arise relating to: our relationship with Innoviva, including Innoviva's and our respective rights and obligations under agreements entered into in connection with the Spin-Off; Innoviva's management of TRC, particularly given that we and Innoviva have different economic interests in TRC; and corporate opportunities that may be available to both companies in the future. Although we and Innoviva have implemented policies and procedures to identify and properly address such potential and actual conflicts of interest, there can be no assurance that, when such conflicts are resolved in accordance with applicable laws, such conflicts of interest will not harm our business, prospects and financial condition and result in the diversion of corporate opportunities to Innoviva.

***If we are required to indemnify Innoviva or Cumberland, or if we are not able to enforce our indemnification rights against Innoviva or Cumberland, our business prospects and financial condition may be harmed.***

We agreed to indemnify Innoviva from and after the Spin-Off with respect to (i) all debts, liabilities and obligations transferred to us in connection with the Spin-Off (including our failure to pay, perform or otherwise promptly discharge any such debts, liabilities or obligations after the Spin-Off), (ii) any misstatement or omission of a material fact resulting in a misleading statement in our Information Statement distributed to Innoviva stockholders in connection with the Spin-Off and (iii) any breach by us of certain agreements entered into with Innoviva in connection with the Spin-Off (namely, the Separation and Distribution Agreement, a Transition Services Agreement, an Employee Matters Agreement, a Tax Matters Agreement, and a Facility Sublease Agreement). We are not aware of any existing indemnification obligations at this time, but any such indemnification obligations that may arise could be significant. Under the terms of the Separation and Distribution Agreement, Innoviva agreed to indemnify us from and after the Spin-Off with respect to (i) all debts, liabilities and obligations retained by Innoviva after the Spin-Off (including its failure to pay, perform or otherwise promptly discharge any such debts, liabilities or obligations after the Spin-Off) and (ii) any breach by Innoviva of the Separation and Distribution Agreement, the Transition Services Agreement, the Employee Matters Agreement, the Tax Matters Agreement, and the Facility Sublease Agreement. Our and Innoviva's ability to satisfy these indemnities, if called upon to do so, will depend upon our and Innoviva's future financial strength. If we are required to indemnify Innoviva, or if we are not able to enforce our indemnification rights against Innoviva, our business prospects and financial condition may be harmed.

In addition, the agreement relating to the sale of VIBATIV to Cumberland contains indemnification obligations of both us and Cumberland. If we are required to indemnify Cumberland or if we are unable to enforce our indemnification rights against Cumberland for any reason, our business and financial condition may be harmed.

## **RISKS RELATED TO LEGAL AND REGULATORY UNCERTAINTY**

***If our efforts to protect the proprietary nature of the intellectual property related to our technologies are not adequate, we may not be able to compete effectively in our current or future markets.***

We rely upon a combination of patents, patent applications, trade secret protection and confidentiality agreements to protect the intellectual property related to our technologies. Any involuntary disclosure to or misappropriation by third parties of this proprietary information could enable competitors to quickly duplicate or surpass our technological achievements, thus eroding our competitive position in our market. The status of patents in the biotechnology and pharmaceutical field involves complex legal and scientific questions and is very uncertain. As of December 31, 2019, we owned 445 issued US patents and 1,590 granted foreign patents, as well as additional pending US and foreign patent applications. Our patent applications may be challenged or fail to result in issued patents and our existing or future patents may be invalidated or be too narrow to prevent third parties from developing or designing around these patents. If the sufficiency of the breadth or strength of protection provided by our patents with respect to a product candidate is threatened, it could dissuade companies from collaborating with us to develop product candidates and threaten our ability to commercialize products. Further, if we encounter delays in our clinical trials or in obtaining regulatory approval of our product candidates, the patent lives of the related product candidates would be reduced.

In addition, we rely on trade secret protection and confidentiality agreements to protect proprietary know-how that is not patentable, for processes for which patents are difficult to enforce and for any other elements of our drug discovery and development processes that involve proprietary know-how, information and technology that is not covered by patent applications. Although we require our employees, consultants, advisors and any third parties who have access to our proprietary know-how, information and technology to enter into confidentiality agreements, we cannot be certain that this know-how, information and technology will not be misappropriated, disclosed or used for unauthorized purposes or that competitors will not otherwise gain access to our trade secrets or independently develop substantially equivalent information and techniques. Further, the laws of some foreign countries do not protect proprietary rights to the same extent as the laws of the US. As a result, we may encounter significant problems in protecting and defending our intellectual property both in the US and abroad. If we are unable to prevent material disclosure of the intellectual property related to our technologies to third parties, we will not be able to establish or, if established, maintain a competitive advantage in our market, which could materially adversely affect our business, financial condition and results of operations, which could cause the price of our securities to fall.

***Litigation to protect or defend our intellectual property or third-party claims of intellectual property infringement would require us to divert resources and may prevent or delay our drug discovery and development efforts.***

Our commercial success depends in part on us and our partners not infringing the patents and proprietary rights of third parties. Third parties may assert that we or our partners are using their proprietary rights without authorization. There are third-party patents that may cover materials or methods for treatment related to our product candidates. At present, we are not aware of any patent infringement claims with merit that would adversely and materially affect our ability to develop our product candidates, but nevertheless the possibility of third-party allegations cannot be ruled out. In addition, third parties may obtain patents in the future and claim that use of our technologies infringes upon these patents. Furthermore, parties making claims against us or our partners may obtain injunctive or other equitable relief, which could effectively block our ability to further develop and commercialize one or more of our product candidates. Defense against these claims, regardless of their merit, would involve substantial litigation expense and would be a substantial diversion of employee resources from our business.

In the event of a successful claim of infringement against us, we may have to pay substantial damages, obtain one or more licenses from third parties or pay royalties. In addition, even in the absence of litigation, we may need to obtain licenses from third parties to advance our research or allow commercialization of our product candidates, and we have done so from time to time. We may fail to obtain any of these licenses at a reasonable cost or on reasonable terms, if at all. In that event, we would be unable to further develop and commercialize one or more of our product candidates, which could harm our business significantly.

In addition, in the future we could be required to initiate litigation to enforce our proprietary rights against infringement by third parties, prevent the unauthorized use or disclosure of our trade secrets and confidential information, or defend the validity of our patents. For example, in 2017, we filed a lawsuit against a former employee for misappropriation of certain of our confidential, proprietary and trade secret information. While this litigation has since been resolved, prosecution of claims to enforce or defend our rights against others involve substantial litigation expenses and divert substantial employee resources from our business but may not result in adequate remedy to us or sufficiently mitigate the harm to our business caused by any intellectual property infringement, unauthorized access, use or disclosure of trade secrets. If we fail to effectively enforce our proprietary rights against others, our business will be harmed and the price of our securities could fall.

***If the efforts of our partners or future partners to protect the proprietary nature of the intellectual property related to collaboration assets are not adequate, the future commercialization of any medicines resulting from collaborations could be delayed or prevented, which would materially harm our business and could cause the price of our securities to fall.***

The risks identified in the two preceding risk factors may also apply to the intellectual property protection efforts of our partners or future partners and to GSK with respect to the GSK-Partnered Respiratory Programs in which we hold an economic interest. To the extent the intellectual property protection of any partnered assets are successfully challenged or encounter problems with the US Patent and Trademark Office or other comparable agencies throughout the world, the future commercialization of these potential medicines could be delayed or prevented. Any challenge to the intellectual property protection of a late-stage development asset, particularly those of the GSK-Partnered Respiratory Programs in which we hold an economic interest, could harm our business and cause the price of our securities to fall.

***Product liability and other lawsuits could divert our resources, result in substantial liabilities and reduce the commercial potential of our medicines.***

The risk that we may be sued on product liability claims is inherent in the development and commercialization of pharmaceutical products. Side effects of, or manufacturing defects in, products that we or our partners develop or commercialize could result in the deterioration of a patient's condition, injury or even death. Once a product is approved for sale and commercialized, the likelihood of product liability lawsuits tends to increase. Claims may be brought by individuals seeking relief for themselves or by individuals or groups seeking to represent a class, asserting injuries based both on potential adverse effects described in the label as well as adverse events not yet observed. We also face an inherent risk of product liability exposure related to the testing of our product candidates in human clinical trials. In addition, changes in laws outside the US are expanding our potential liability for injuries that occur during clinical trials. Product liability claims could harm our reputation, regardless of the merit or ultimate success of the claim, which may adversely affect our and our partners' ability to commercialize our products and cause the price of our securities to fall. These lawsuits may divert our management from pursuing our business strategy and may be costly to defend. In addition, if we are held liable in any of these lawsuits, we may incur substantial liabilities and may be forced to limit or forgo further commercialization of the applicable products.

Although we maintain general liability and product liability insurance, this insurance may not fully cover potential liabilities and we cannot be sure that our insurer will not disclaim coverage as to a future claim. In addition, inability to obtain or maintain sufficient insurance coverage at an acceptable cost or to otherwise protect against potential product liability claims could prevent or inhibit the commercial production and sale of our products, which could adversely affect our business.

We may also be required to prosecute or defend general commercial, intellectual property, securities and other lawsuits. Litigation typically involves substantial expenses and diverts substantial employee resources from our business. The cost of defending any product liability litigation or engaging in any other legal proceeding, even if resolved in our favor, could be substantial and uncertainties resulting from the initiation and continuation of the litigation or other proceedings could have a material adverse effect on our ability to compete in the marketplace and achieve our business goals.

***If we fail to comply with data protection laws and regulations, we could be subject to government enforcement actions (which could include civil or criminal penalties), private litigation and/or adverse publicity, which could negatively affect our operating results and business.***

We are subject to data protection laws and regulations (i.e., laws and regulations that address privacy and data security). In the US, numerous federal and state laws and regulations, including state data breach notification laws, state health information privacy laws, and federal and state consumer protection laws (e.g., Section 5 of the FTC Act), govern the collection, use, disclosure, and protection of health-related and other personal information. In California, the California Consumer Privacy Act ("CCPA") took effect on January 1, 2020. The CCPA establishes certain requirements for data use and sharing transparency and creates new data privacy rights for consumers. These laws and regulations are evolving and subject to interpretation, and may impose limitations on our activities or otherwise adversely affect our business. Failure to comply with data protection laws and regulations could result in government enforcement actions and create liability for us (which could include civil and/or criminal penalties), private litigation and/or adverse publicity that could negatively affect our operating results and business. In addition, we may obtain health information from third parties (e.g., healthcare providers who prescribe our products) that are subject to privacy and security requirements under the Health Insurance Portability and Accountability Act of 1996, as amended by the Health Information Technology for Economic and Clinical Health Act ("HIPAA"). Although we are not directly subject to HIPAA—other than with respect to providing certain employee benefits—we could be subject to criminal penalties if we knowingly obtain or disclose individually identifiable health information maintained by a HIPAA-covered entity in a manner that is not authorized or permitted by HIPAA. HIPAA generally requires that healthcare providers and other covered entities obtain written authorizations from patients prior to disclosing protected health information of the patient (unless an exception to the authorization requirement applies). If authorization is required and the patient fails to execute an authorization or the authorization fails to contain all required provisions, then we may not be allowed access to and use of the patient's information and our research efforts could be impaired or delayed. Furthermore, use of protected health information that is provided to us pursuant to a valid patient authorization is subject to the limits set forth in the authorization (e.g., for use in research and in submissions to regulatory authorities for product approvals). In addition, HIPAA does not replace federal, state, international or other laws that may grant individuals even greater privacy protections.

EU Member States and other jurisdictions where we operate have adopted data protection laws and regulations, which impose significant compliance obligations. For example, the General Data Protection Regulation ("GDPR") which became applicable on May 25, 2018, replacing the EU Data Protection Directive, imposes strict obligations and restrictions on the ability to collect, analyze and transfer personal data, including health data from clinical trials and adverse event reporting.

Switzerland has adopted laws that impose restrictions and obligations similar to the GDPR. These obligations and restrictions concern, in particular, the consent of the individuals to whom the personal data relate, the information provided to the individuals, the transfer of personal data out of the European Economic Area ("EEA") or Switzerland, security breach notifications, security and confidentiality of the personal data, as well as substantial potential fines for breaches of the data protection obligations. Data protection authorities from the different EU Member States may interpret the GDPR and applicable related national laws differently and impose requirements additional to those provided in the GDPR. In addition, guidance on implementation and compliance practices may be updated or otherwise revised, which adds to the complexity of processing personal data in the EU. When processing personal data of subjects in the EU, we have to comply with the applicable data protection laws. In particular, as we rely on services providers processing personal data of subjects in the EU, we have to enter into suitable contract terms with such providers and receive sufficient guarantees that such providers meet the requirements of the applicable data protection laws, particularly the GDPR which imposes specific and relevant obligations.

Legal mechanisms to allow for the transfer of personal data from the EEA to the US have been challenged in the European Court of Justice, which generally increases uncertainty around compliance with EU privacy law requirements as these relate to transfer of data from the EU to the US. In 2016, the European Commission and the US Department of Commerce ("DOC") put in place the EU-US "Privacy Shield," which has been relied on by some US companies since that time to transfer data to the US, and, in its third annual review of the Privacy Shield in October 2019, the European Commission concluded that the U.S. continues to ensure an adequate level of protection for personal data transferred under the Privacy Shield. In addition, the DOC increased its monitoring and surveillance activities and introduced new oversight procedures and will increase pressure on companies to comply with Privacy Shield. However, in October 2016, an action for annulment was brought by three French digital rights advocacy groups, which is still pending before the General Court of the European Court of Justice. The US was admitted as an intervener in the action in 2018. If the European Court of Justice invalidates the Privacy Shield, it will no longer be possible to rely on the Privacy Shield certification to support transfer of personal data from the EU to entities in the US. Adherence to the Privacy Shield is not, however, mandatory. US-based companies are permitted to rely either on their adherence to the Privacy Shield or on the other authorized means and procedures to transfer personal data provided by the GDPR.

In addition, the privacy and data security landscape in the EU continues to remain in flux. The agreement that will hopefully be concluded between the EU and the UK following the UK's withdrawal from the EU on January 31, 2020 may require organizations to revisit the way they transfer personal data from and to the UK. The GDPR has introduced additional data protection obligations that can have specific impact on the conduct of clinical trials in the EEA. This includes obligations concerning the rights of patients in relation to their personal data collected during the clinical trials and the need to conclude arrangements with clinical trials sites concerning data processing activities. Any perceived failure to ensure protection of patients' rights during clinical trials or to ensure that sites fulfil obligations imposed by GDPR concerning their related processing activities could undermine the validity of the results of these clinical trials.

If we or our vendors fail to comply with applicable data privacy laws, or if the legal mechanisms we or our vendors rely upon to allow for the transfer of personal data from the EEA or Switzerland to the US (or other countries not considered by the European Commission to provide an adequate level of data protection) are not considered adequate, we could be subject to government enforcement actions and significant penalties against us. Moreover, our business could be adversely impacted if our ability to transfer personal data outside of the EEA or Switzerland to the US is restricted, which could adversely impact our operating results.

***Changes in healthcare law and implementing regulations, including government restrictions on pricing and reimbursement, as well as healthcare policy and other healthcare payor cost-containment initiatives, may negatively impact us, our collaboration partners, or those commercializing products with respect to which we have an economic interest or right to receive royalties.***

The continuing efforts of the government, insurance companies, managed care organizations and other payors of health care costs to contain or reduce costs of health care may adversely affect us, our collaboration partners, or those commercializing products with respect to which we have an economic interest or right to receive royalties in regard to one or more of the following:

- the ability to set and collect a price believed to be reasonable for products;
- the ability to generate revenues and achieve profitability; and
- the availability of capital.

The pricing and reimbursement environment for products may change in the future and become more challenging due to, among other reasons, policies advanced by the current or new presidential administrations, federal agencies, new healthcare legislation passed by Congress or fiscal challenges faced by all levels of government health administration authorities. Among policy makers and payors in the US and elsewhere, there is significant interest in promoting changes in healthcare systems with the stated goals of containing healthcare costs, improving quality and expanding access to healthcare. In the US, the pharmaceutical industry has been a particular focus of these efforts and has been and may in the future be significantly affected by major legislative initiatives. For instance, in the fourth quarter of 2018, the Centers for Medicare & Medicaid Services ("CMS"), the federal agency that administers the Medicare and Medicaid programs, released an advance notice of proposed rule-making to solicit feedback on a potential change in the way Medicare Part B pays for certain physician-administered drugs. Under Part B's current reimbursement policy, for most drugs, Medicare pays providers the average sales price of the drug plus 6% (reduced to 4.3% as a result of sequestration). CMS is considering a methodology that would more closely align payment for these drugs with prices in certain countries (such as Canada, the United Kingdom, Japan, and Germany), allow private-sector vendors to negotiate prices, and pay providers a flat add-on payment not tied to the price of the drug. We expect we, our collaboration partners or those commercializing products with respect to which we have an economic interest or right to receive royalties may experience pricing pressures in connection with the sale of drug products, due to the trend toward managed healthcare, the increasing influence of health maintenance organizations and additional legislative enactments.

The Patient Protection and Affordable Care Act, as amended by the Health Care and Education Reconciliation Act of 2010 (together the "Healthcare Reform Act"), is a sweeping measure intended to expand healthcare coverage within the US, primarily through the imposition of health insurance mandates on employers and individuals, the provision of subsidies to eligible individuals enrolled in plans offered on the health insurance exchanges, and expansion of the Medicaid program. This law has substantially changed the way healthcare is financed by both governmental and private insurers, and has significantly impacted the pharmaceutical industry. The Healthcare Reform Act contains a number of provisions that impact our business and operations, including those governing enrollment in federal healthcare programs, reimbursement changes, benefits for patients within a coverage gap in the Medicare Part D prescription drug program (commonly known as the "donut hole"), rules regarding prescription drug benefits under the health insurance exchanges, changes to the Medicare Drug Rebate program, expansion of the Public Health Service Act's 340B drug pricing program, fraud and abuse and enforcement. These changes have impacted previously existing government healthcare programs and have resulted in the development of new programs, including Medicare payment for performance initiatives and improvements to the physician quality reporting system and feedback program.

In particular, CMS issued final regulations to implement the changes to the Medicaid Drug Rebate program under the Healthcare Reform Act. These regulations became effective on April 1, 2016. Congress could enact additional legislation that further increases Medicaid drug rebates or other costs and charges associated with participating in the Medicaid Drug Rebate program. The issuance of regulations and coverage expansion by various governmental agencies relating to the Medicaid Drug Rebate program has increased and will continue to increase the costs and the complexity of compliance, has been and will be time-consuming to implement, and could have a material adverse effect on results of operations for us, our collaboration partners, or those commercializing products with respect to which we have an economic interest or right to receive royalties, particularly if CMS challenges the approach we take in our implementation of the final regulation.

Some states have elected not to expand their Medicaid programs by raising the income limit to 133% of the federal poverty level, as is permitted under the Healthcare Reform Act. For each state that does not choose to expand its Medicaid program, there may be fewer insured patients overall, which could impact the sales, business and financial condition of us, our collaboration partners, or those commercializing products with respect to which we have an economic interest or right to receive royalties. Where Medicaid patients receive insurance coverage under any of the new options made available through the Healthcare Reform Act, manufacturers may be required to pay Medicaid rebates on drugs used under these circumstances, which could impact manufacturer revenues.

Certain provisions of the Healthcare Reform Act have been subject to judicial challenges as well as efforts to repeal or replace them or to alter their interpretation or implementation. For example, the Tax Cuts and Jobs Act enacted on December 22, 2017 (the "Tax Act"), eliminated the shared responsibility payment for individuals who fail to maintain minimum essential coverage under section 5000A of the Internal Revenue Code of 1986, commonly referred to as the individual mandate, effective January 1, 2019. In December 2018, a United States District Court Judge for the Northern District of Texas ruled (i) that the "individual mandate" was unconstitutional as a result of the associated tax penalty being repealed by Congress as part of the Tax Act; and (ii) the individual mandate is not severable from the rest of the ACA, and as a result the entire Healthcare Reform Act is invalid. On December 18, 2019, the U.S. Court of Appeals for the Fifth Circuit affirmed the district court's decision that the individual mandate is unconstitutional, but remanded the case to the district court to reconsider the severability question. It is unclear how the ultimate decision in this case, or other efforts to repeal, replace, or invalidate the Healthcare Reform Act or its implementing regulations, or portions thereof, will affect the Healthcare Reform Act or our business. Additional legislative changes to and regulatory changes under the Healthcare Reform Act remain possible, but the nature and extent of such potential additional changes are uncertain at this time. We expect that the Healthcare Reform Act, its implementation, efforts to repeal or replace, or invalidate the Healthcare Reform Act, or portions thereof, and other healthcare reform measures that may be adopted in the future, could have a material adverse effect on our industry generally and on the ability of us, our collaboration partners, or those commercializing products with respect to which we have an economic interest or right to receive royalties to maintain or increase sales of existing products or to successfully commercialize product candidates, if approved.

In addition, there have been proposals to modify the Medicare Part D benefit, including by imposing federally-mandated rebates on all drugs dispensed to Medicare Part D enrollees or on only those drugs dispensed to certain groups of lower income beneficiaries. If any of these proposals are adopted including any that result in additional rebates, this could have a negative impact on revenues for our collaboration partners, or those commercializing products with respect to which we have an economic interest or right to receive royalties, which could impact our revenues.

On August 2, 2011, the Budget Control Act of 2011, among other things, created the Joint Select Committee on Deficit Reduction to recommend to Congress proposals for spending reductions. The Joint Select Committee did not achieve a targeted deficit reduction, which triggered the legislation's automatic reductions. In concert with subsequent legislation, this has resulted in aggregate reductions to Medicare payments to providers of, on average, 2% per fiscal year through 2027 unless Congress takes additional action. As long as these cuts remain in effect, they could adversely impact payment for any products that are reimbursed under Medicare. We expect that additional state and federal healthcare reform measures will be adopted in the future, any of which could limit the amounts that federal and state governments will pay for healthcare products and services, which could result in reduced demand for product or additional pricing pressures for our collaboration partners, or those commercializing products with respect to which we have an economic interest or right to receive royalties, which could impact our revenues.

***If we failed to comply with our reporting and payment obligations under the Medicaid Drug Rebate program or other governmental pricing programs, we could be subject to additional reimbursement requirements, penalties, sanctions and fines, which could have a material adverse effect on our business, financial condition, results of operations and growth prospects.***

Prior to the sale of VIBATIV to Cumberland, we had certain price reporting obligations to the Medicaid Drug Rebate program and other governmental pricing programs, and we had obligations to report average sales price under the Medicare program. Following the consummation of the transaction with Cumberland, our price reporting obligations related to VIBATIV have been transitioned to Cumberland, and price reporting obligations for YUPELRI reside with Mylan. However, we retain liability related to price reporting for VIBATIV for historic periods.

Under the Medicaid Drug Rebate program, a manufacturer is required to pay a rebate to each state Medicaid program for its covered outpatient drugs that are dispensed to Medicaid beneficiaries and paid for by a state Medicaid program as a condition of having federal funds being made available to the states for our drugs under Medicaid and Medicare Part B. Those rebates are based on pricing data reported by the manufacturer on a monthly and quarterly basis to CMS, the federal agency that administers the Medicaid Drug Rebate program. These data include the average manufacturer price and, in the case of innovator products, the best price for each drug which, in general, represents the lowest price available from the manufacturer to any entity in the US in any pricing structure, calculated to include all sales and associated rebates, discounts and other price concessions.

Federal law requires that any company that participates in the Medicaid Drug Rebate program also participate in the Public Health Service's 340B drug pricing program in order for federal funds to be available for the manufacturer's drugs under Medicaid and Medicare Part B. The 340B program requires participating manufacturers to agree to charge no more than the 340B "ceiling price" for the manufacturer's covered outpatient drugs to a variety of community health clinics and other entities that receive health services grants from the Public Health Service, as well as hospitals that serve a disproportionate share of low-income patients. Manufacturers also are required to report their 340B ceiling prices to HRSA on a quarterly basis. A final regulation regarding the calculation of the 340B ceiling price and the imposition of civil monetary penalties on manufacturers that knowingly and intentionally overcharge covered entities became effective on January 1, 2019.

Federal law also requires that a company that participates in the Medicaid Drug Rebate program report average sales price information each quarter to CMS for certain categories of drugs that are paid under the Medicare Part B program. Manufacturers calculate the average sales price based on a statutorily defined formula as well as regulations and interpretations of the statute by CMS. CMS uses these submissions to determine payment rates for drugs under Medicare Part B.

Pricing and rebate calculations vary across products and programs, are complex, and are often subject to interpretation by the manufacturer, governmental or regulatory agencies and the courts. A manufacturer that becomes aware that its Medicaid reporting for a prior quarter was incorrect, or has changed as a result of recalculation of the pricing data, is obligated to resubmit the corrected data for up to three years after those data originally were due. Such restatements and recalculations increase the costs for complying with the laws and regulations governing the Medicaid Drug Rebate program and could result in an overage or underage in our rebate liability for past quarters. Price recalculations also may affect the 340B ceiling price.

We are liable for errors associated with our submission of pricing data. In addition to retroactive rebates and the potential for 340B program refunds, if we are found to have knowingly submitted any false price information to the government, we may be liable for significant civil monetary penalties per item of false information. If we are found to have made a misrepresentation in the reporting of our average sales price, the Medicare statute provides for significant civil monetary penalties for each misrepresentation for each day in which the misrepresentation was applied. If we are found to have charged 340B covered entities more than the statutorily mandated ceiling price, we could be subject to significant civil monetary penalties. Our failure to submit the required price data on a timely basis could result in a significant civil monetary penalty per day for each day the information is late beyond the due date. Such failure also could be grounds for CMS to terminate our Medicaid drug rebate agreement, pursuant to which we participate in the Medicaid program. In the event that CMS terminates our rebate agreement, federal payments may not be available under Medicaid or Medicare Part B for our covered outpatient drugs.

In order to be eligible to have its products paid for with federal funds under the Medicaid and Medicare Part B programs and purchased by the Department of Veterans Affairs ("VA"), Department of Defense ("DoD"), Public Health Service, and Coast Guard (the "Big Four agencies") and certain federal grantees, a manufacturer is required to participate in the VA Federal Supply Schedule ("FSS") pricing program, established under Section 603 of the Veterans Health Care Act of 1992. Under this program, the manufacturer is obligated to make its covered drugs available for procurement on an FSS contract and charge a price to the Big Four agencies that is no higher than the Federal Ceiling Price ("FCP"), which is a price calculated pursuant to a statutory formula. The FCP is derived from a calculated price point called the "non-federal average manufacturer price" ("Non-FAMP"), which the manufacturer calculates and reports to the VA on a quarterly and annual basis. Pursuant to applicable law, knowing provision of false information in connection with a Non-FAMP filing can subject a manufacturer to significant penalties for each item of false information. The FSS contract also contains extensive disclosure and certification requirements.

Under Section 703 of the National Defense Authorization Act for FY 2008, the manufacturer is required to pay quarterly rebates to DoD on utilization of its innovator products that are dispensed through DoD's Tricare network pharmacies to Tricare beneficiaries. The rebates are calculated as the difference between the annual Non-FAMP and FCP for the calendar year that the product was dispensed. A manufacturer that overcharges the government in connection with the FSS contract or Tricare Retail Pharmacy Rebate Program, whether due to a misstated FCP or otherwise, is required to refund the difference to the government. Failure to make necessary disclosures and/or to identify contract overcharges can result in allegations against us under the False Claims Act and other laws and regulations.

***Our relationships with customers and third-party payors are subject to applicable anti-kickback, fraud and abuse, transparency and other healthcare laws and regulations, which could expose us to criminal sanctions, civil penalties, exclusion, contractual damages, reputational harm and diminished profits and future earnings.***

Healthcare providers, physicians, distributors and third-party payors play a primary role in the distribution, recommendation and prescription of any pharmaceutical product for which we obtain marketing approval. Our arrangements with third-party payors and customers expose us to broadly applicable fraud and abuse and other healthcare laws and regulations that may constrain the business or financial arrangements through which we market, sell and distribute any products for which we have obtained or may obtain marketing approval. Restrictions under applicable federal and state healthcare laws and regulations include the following:

- The US federal healthcare Anti-Kickback Statute prohibits any person from, among other things, knowingly and willfully offering, paying, soliciting, or receiving remuneration, directly or indirectly, in cash or in kind, to induce or reward either the referral of an individual for, or the purchasing, leasing, ordering or arranging for or recommending of any good or service for which payment may be made, in whole or in part, under federal and state healthcare programs such as Medicare and Medicaid. The term "remuneration" has been broadly interpreted to include anything of value. The Anti-Kickback Statute is subject to evolving interpretation and has been applied by government enforcement officials to a number of common business arrangements in the pharmaceutical industry. The government can establish a violation of the Anti-Kickback Statute without proving that a person or entity had actual knowledge of the statute or specific intent to violate it. There are a number of statutory exemptions and regulatory safe harbors protecting some common activities from prosecution; however, those exceptions and safe harbors are drawn narrowly. Failure to meet all of the requirements of a particular statutory exception or regulatory safe harbor does not make the conduct per se illegal under the Anti-Kickback Statute, but the legality of the arrangement will be evaluated on a case-by-case basis based on the totality of the facts and circumstances. We seek to comply with the available statutory exemptions and safe harbors whenever possible, but our practices may not in all cases meet all of the criteria for safe harbor protection from anti-kickback liability. Moreover, there are no safe harbors for many common practices, such as educational and research grants or patient or product assistance programs. In October 2019, the federal government published a proposed regulation that would create new safe harbors for (among other things) certain value-based arrangements and patient engagement tools, and modify and clarify the scope of existing safe harbors for warranties and personal service agreements; even if it is finalized, the impact of the proposed regulation on our operations is not yet clear.
- The federal civil False Claims Act prohibits, among other things, knowingly presenting, or causing to be presented, claims for payment of government funds that are false or fraudulent, or knowingly making, or using or causing to be made or used, a false record or statement material to a false or fraudulent claim to avoid, decrease, or conceal an obligation to pay money to the federal government. Private individuals, commonly known as "whistleblowers," can bring civil False Claims Act *qui tam* actions, on behalf of the government and such individuals and may share in amounts paid by the entity to the government in recovery or settlement. In recent years, several pharmaceutical and other healthcare companies have faced enforcement actions under the federal False Claims Act for, among other things, allegedly submitting false or misleading pricing information to government health care programs and providing free product to customers with the expectation that the customers would bill federal programs for the product. Federal enforcement agencies also have showed increased interest in pharmaceutical companies' product and patient assistance programs, including reimbursement and co-pay support services, and a number of investigations into these programs have resulted in significant civil and criminal settlements. Other companies have faced enforcement actions for causing false claims to be submitted because of the company's marketing the product for unapproved, and thus non-reimbursable, uses. In addition, a claim including items or services resulting from a violation of the federal Anti-Kickback Statute constitutes a false or fraudulent claim for purposes of the federal civil False Claims Act. False Claims Act liability is potentially significant in the healthcare industry because the statute provides for treble damages and significant mandatory penalties per false claim or statement for violations. Because of the potential for large monetary exposure, healthcare and pharmaceutical companies often resolve allegations without admissions of liability for significant and material amounts to avoid the uncertainty of treble damages and per claim penalties that may be awarded in litigation proceedings. Companies may be required, however, to enter into corporate integrity agreements with the government, which may impose substantial costs on companies to ensure compliance. Criminal penalties, including imprisonment and criminal fines, are also possible for making or presenting a false, fictitious or fraudulent claim to the federal government.

- HIPAA, among other things, imposes criminal and civil liability for knowingly and willfully executing a scheme to defraud any healthcare benefit program, including private third-party payors, and also imposes obligations, including mandatory contractual terms, with respect to safeguarding the privacy, security and transmission of individually identifiable health information. HIPAA also prohibits knowingly and willfully falsifying, concealing or covering up a material fact or making any materially false, fictitious or fraudulent statement or representation, or making or using any false writing or document knowing the same to contain any materially false fictitious or fraudulent statement or entry in connection with the delivery of or payment for healthcare benefits, items or services. Similar to the federal healthcare Anti-Kickback Statute, a person or entity does not need to have actual knowledge of the statute or specific intent to violate it to have committed a violation.
- The federal Physician Payment Sunshine Act, being implemented as the Open Payments Program, requires certain manufacturers of drugs, devices, biologics, and medical supplies for which payment is available under Medicare, Medicaid or the Children's Health Insurance Program (with certain exceptions) to report annually to the US Department of Health and Human Services, Centers for Medicare and Medicaid Services, information related to payments and other transfers of value, directly or indirectly, to physicians (defined to include doctors, dentists, optometrists, podiatrists, and chiropractors) and teaching hospitals, as well as ownership and investment interests held by physicians and their immediate family members. Beginning in 2022, applicable manufacturers also will be required to report information regarding payments and transfers of value provided to physician assistants, nurse practitioners, clinical nurse specialists, certified nurse anesthetists, and certified nurse-midwives. A manufacturer's failure to submit timely, accurately and completely the required information for all payments, transfers of value or ownership or investment interests may result in civil monetary penalties of up to an aggregate of \$150,000 per year, and up to an aggregate of \$1 million per year for "knowing failures." Manufacturers must submit reports by the 90th day of each calendar year.
- Analogous state laws and regulations, such as state anti-kickback and false claims laws, may apply to sales or marketing arrangements and claims involving healthcare items or services reimbursed by any third-party payors, including private insurers or patients. Several states also require pharmaceutical companies to report expenses relating to the marketing and promotion of pharmaceutical products in those states and to report gifts and payments to individual health care providers in those states. Some of these states also prohibit certain marketing-related activities, including the provision of gifts, meals, or other items to certain health care providers, and restrict the ability of manufacturers to offer co-pay support to patients for certain prescription drugs. Some states require the posting of information relating to clinical studies and their outcomes. Some states and cities require identification or licensing of sales representatives. In addition, several states require pharmaceutical companies to implement compliance programs or marketing codes.
- Similar restrictions are imposed on the promotion and marketing of medicinal products in the EU Member States and other countries, including restrictions prohibiting the promotion of a compound prior to its approval. Laws (including those governing promotion, marketing and anti-kickback provisions), industry regulations and professional codes of conduct often are strictly enforced. Even in those countries where we may decide not to directly promote or market our products, inappropriate activity by our international distribution partners could have implications for us.

The shifting commercial compliance environment and the need to build and maintain robust and expandable systems to comply with different compliance or reporting requirements in multiple jurisdictions increase the possibility that we or our partners may fail to comply fully with one or more of these requirements. Efforts to ensure that our business arrangements with third parties will comply with applicable healthcare laws and regulations may involve substantial costs. It is possible that governmental authorities will conclude that our business practices may not comply with applicable fraud and abuse or other healthcare laws and regulations or guidance. If our operations are found to be in violation of any of these laws or any other governmental regulations that may apply to us, we may be subject to significant civil, criminal and administrative penalties, damages, fines, disgorgement, exclusion from government funded healthcare programs, such as Medicare and Medicaid in the US and similar programs outside the US, contractual damages, diminished profits and future earnings, and the curtailment or restructuring of our operations, any of which could adversely affect our ability to operate our business and our financial results. If any of the physicians or other providers or entities with whom we do or expect to do business are found to not be in compliance with applicable laws, they may be subject to criminal, civil or administrative sanctions, including exclusions from government funded healthcare programs. Even if we are not determined to have violated these laws, government investigations into these issues typically require the expenditure of significant resources and generate negative publicity, which could harm our financial condition and divert resources and the attention of our management from operating our business.

***Our business and operations, including the use of hazardous and biological materials may result in liabilities with respect to environmental, health and safety matters.***

Our research and development activities involve the controlled use of potentially hazardous substances, including chemical, biological and radioactive materials. In addition, our operations produce hazardous waste products, including hazardous waste. Federal, state and local laws and regulations govern the use, manufacture, management, storage, handling and disposal of hazardous materials and wastes. We may incur significant additional costs or liabilities to comply with, or for violations of, these and other applicable laws in the future. Also, even if we are in compliance with applicable laws, we cannot completely eliminate the risk of contamination or injury resulting from hazardous materials and we may incur liability as a result of any such contamination or injury. Further, in the event of a release of or exposure to hazardous materials, including at the sites we currently or formerly operate or at sites such as landfills where we send wastes for disposal, we could be held liable for cleanup costs or damages or subject to other costs or penalties and such liability could exceed our resources. We do not have any insurance for liabilities arising from hazardous materials or under environmental laws. Compliance with or liability under applicable environmental laws and regulations or with respect to hazardous materials may be expensive, and current or future environmental regulations may impair our research, development and production efforts, which could harm our business, which could cause the price of our securities to fall.

## **RISKS RELATING TO OUR ORDINARY SHARES**

***The market price for our shares has and may continue to fluctuate widely, and may result in substantial losses for purchasers of our ordinary shares.***

The market price for our shares has and may continue to fluctuate widely, and may result in substantial losses for purchasers of our ordinary shares. To the extent that low trading volumes for our ordinary shares continues, our stock price may fluctuate significantly more than the stock market as a whole or the stock prices of similar companies. Without a larger public float of actively traded shares, our ordinary shares are likely to be more sensitive to changes in sales volumes, market fluctuations and events or perceived events with respect to our business, than the shares of common stock of companies with broader public ownership, and as a result, the trading prices for our ordinary shares may be more volatile. Among other things, trading of a relatively small volume of ordinary shares may have a greater effect on the trading price than would be the case if our public float of actively traded shares were larger. In addition, as further described below under the risk factor entitled "*—Concentration of ownership will limit your ability to influence corporate matters,*" a number of shareholders hold large concentrations of our shares which, if sold within a relatively short timeframe, could cause the price of our shares to drop significantly.

Market prices for securities of biotechnology and biopharmaceutical companies have been highly volatile, and we expect such volatility to continue for the foreseeable future, so that investment in our ordinary shares involves substantial risk. Additionally, the stock market from time to time has experienced significant price and volume fluctuations unrelated to the operating performance of particular companies.

The following are some of the factors that may have a significant effect on the market price of our ordinary shares:

- lower than expected sales of YUPELRI;
- any adverse developments or results or perceived adverse developments or results with respect to the GSK Partnered Respiratory Programs including, without limitation, lower than expected sales of TRELEGY ELLIPTA, difficulties or delays encountered with regard to the FDA or other regulatory authorities in these programs or any indication from clinical or non-clinical studies that the compounds in such programs are not safe or efficacious;
- any adverse developments or results or perceived adverse developments or results with respect to our key clinical development programs, for example our JAK inhibitor program or amprelosetine, including, without limitation, any delays in development in these programs, any halting of development in these programs, any difficulties or delays encountered with regard to the FDA or other regulatory authorities in these programs (including any class-based risks that emerge as a FDA or other regulatory agency focus), or any indication from clinical or non-clinical studies that the compounds in such programs are not safe or efficacious;
- any announcements of developments with, or comments by, the FDA or other regulatory authorities with respect to products we or our partners have under development, are manufacturing or have commercialized;
- any adverse developments or disagreements or perceived adverse developments or disagreements with respect to our relationship with Innoviva, such as our recently completed arbitration proceeding, or the relationship of Innoviva or TRC on the one hand and GSK on the other hand, including any such developments or disagreements resulting from or relating to the TRC LLC Agreement or to the Spin-Off;
- any adverse developments or perceived adverse developments with respect to our relationship with any of our research, development or commercialization partners, including, without limitation, disagreements that may arise between us and any of those partners;
- any adverse developments or perceived adverse developments in our programs with respect to partnering efforts or otherwise;
- announcements of patent issuances or denials, technological innovations or new commercial products by us or our competitors;

- publicity regarding actual or potential study results or the outcome of regulatory review relating to products under development by us, our partners or our competitors;
- regulatory developments in the US and foreign countries;
- announcements with respect to governmental or private insurer reimbursement policies;
- announcements of equity or debt financings;
- possible impairment charges on non-marketable equity securities;
- economic and other external factors beyond our control, such as fluctuations in interest rates;
- loss of key personnel;
- likelihood of our ordinary shares to be more sensitive to changes in sales volume, market fluctuations and events or perceived events with respect to our business due to our small public float;
- low public market trading volumes for our ordinary shares related in part to the concentration of ownership of our shares;
- the sale of large concentrations of our shares, which may be more likely to occur due to the concentration of ownership of our shares, such as what we experienced when our largest shareholder, Woodford Investment Management Limited, divested its holdings;
- developments or disputes as to patent or other proprietary rights;
- approval or introduction of competing products and technologies;
- results of clinical trials;
- failures or unexpected delays in timelines for our potential products in development, including the obtaining of regulatory approvals;
- delays in manufacturing adversely affecting clinical or commercial operations;
- fluctuations in our operating results;
- market reaction to announcements by other biotechnology or pharmaceutical companies;
- initiation, termination or modification of agreements with our collaborators or disputes or disagreements with collaborators;
- litigation or the threat of litigation;
- public concern as to the safety of product candidates or medicines developed by us; and
- comments and expectations of results made by securities analysts or investors.

If any of these factors causes us to fail to meet the expectations of securities analysts or investors, or if adverse conditions prevail or are perceived to prevail with respect to our business, the price of the ordinary shares would likely drop significantly. A significant drop in the price of a company's securities often leads to the filing of securities class action litigation against the company. This type of litigation against us could result in substantial costs and a diversion of management's attention and resources.

***Concentration of ownership will limit your ability to influence corporate matters.***

Based on our review of publicly available filings, as of December 31, 2019, we believe our three largest shareholders collectively owned approximately 48% of our outstanding ordinary shares. Certain of these shareholders could report changes in beneficial ownership in connection with the Schedule 13G filing deadline on February 14, 2020, and any such changes would affect the aggregate percentage ownership of these three shareholders. These shareholders could control the outcome of actions taken by us that require shareholder approval, including a transaction in which shareholders might receive a premium over the prevailing market price for their shares.

***Certain provisions in our constitutional and other documents may discourage our acquisition by a third-party, which could limit your opportunity to sell shares at a premium.***

Our constitutional documents include provisions that could limit the ability of others to acquire control of us, modify our structure or cause us to engage in change-of-control transactions, including, among other things, provisions that:

- require supermajority shareholder voting to effect certain amendments to our amended and restated memorandum and articles of association;
- establish a classified board of directors;
- restrict our shareholders from calling meetings or acting by written consent in lieu of a meeting;
- limit the ability of our shareholders to propose actions at duly convened meetings; and
- authorize our board of directors, without action by our shareholders, to issue preferred shares and additional ordinary shares.

In addition, in May 2018, our shareholders approved a resolution authorizing our board of directors to adopt a shareholder rights plan in the future intended to deter any person from acquiring more than 19.9% of our outstanding ordinary shares without the approval of our board of directors.

These provisions could have the effect of depriving you of an opportunity to sell your ordinary shares at a premium over prevailing market prices by discouraging third parties from seeking to acquire control of us in a tender offer or similar transaction.

***Our shareholders may face difficulties in protecting their interests because we are incorporated under Cayman Islands law.***

Our corporate affairs are governed by our amended and restated memorandum and articles of association, by the Companies Law (2020 Revision) of the Cayman Islands and by the common law of the Cayman Islands. The rights of our shareholders and the fiduciary responsibilities of our directors under the laws of the Cayman Islands are different from those under statutes or judicial precedent in existence in jurisdictions in the US. Therefore, you may have more difficulty in protecting your interests than would shareholders of a corporation incorporated in a jurisdiction in the US, due to the different nature of Cayman Islands law in this area.

Shareholders of Cayman Islands exempted companies such as our company have no general rights under Cayman Islands law to inspect corporate records and accounts or to obtain copies of lists of shareholders. Our directors have discretion under our amended and restated memorandum and articles of association to determine whether or not, and under what conditions, our corporate records may be inspected by our shareholders, but are not obliged to make them available to our shareholders. This may make it more difficult for you to obtain the information needed to establish any facts necessary for a shareholder motion or to solicit proxies from other shareholders in connection with a proxy contest.

Our Cayman Islands counsel, Maples and Calder, is not aware of any reported class action having been brought in a Cayman Islands court. Derivative actions have been brought in the Cayman Islands courts, and the Cayman Islands courts have confirmed the availability for such actions. In most cases, the company will be the proper plaintiff in any claim based on a breach of duty owed to it, and a claim against (for example) our officers or directors usually may not be brought by a shareholder. However, based on English authorities, which would in all likelihood be of persuasive authority and be applied by a court in the Cayman Islands, exceptions to the foregoing principle apply in circumstances in which:

- a company is acting, or proposing to act, illegally or beyond the scope of its authority;
- the act complained of, although not beyond the scope of the authority, could be effected if duly authorized by more than the number of votes which have actually been obtained; or
- those who control the company are perpetrating a "fraud on the minority."

A shareholder may have a direct right of action against the company where the individual rights of that shareholder have been infringed or are about to be infringed.

***There is uncertainty as to shareholders' ability to enforce certain foreign civil liabilities in the Cayman Islands.***

We are incorporated as an exempted company limited by shares with limited liability under the laws of the Cayman Islands. A material portion of our assets are located outside of the US. As a result, it may be difficult for our shareholders to enforce judgments against us or judgments obtained in US courts predicated upon the civil liability provisions of the federal securities laws of the US or any state of the US.

We have been advised by our Cayman Islands legal counsel, Maples and Calder, that the courts of the Cayman Islands are unlikely (i) to recognize or enforce against Theravance Biopharma judgments of courts of the US predicated upon the civil liability provisions of the securities laws of the US or any State; and (ii) in original actions brought in the Cayman Islands, to impose liabilities against Theravance Biopharma predicated upon the civil liability provisions of the securities laws of the US or any State, on the grounds that such provisions are penal in nature. However, in the case of laws that are not penal in nature, although there is no statutory enforcement in the Cayman Islands of judgments obtained in the US, the courts of the Cayman Islands will recognize and enforce a foreign money judgment of a foreign court of competent jurisdiction without retrial on the merits based on the principle that a judgment of a competent foreign court imposes upon the judgment debtor an obligation to pay the sum for which judgment has been given provided certain conditions are met. For a foreign judgment to be enforced in the Cayman Islands, such judgment must be final and conclusive and for a liquidated sum, and must not be in respect of taxes or a fine or penalty, inconsistent with a Cayman Islands' judgment in respect of the same matter, impeachable on the grounds of fraud or obtained in a manner, and or be of a kind the enforcement of which is, contrary to natural justice or the public policy of the Cayman Islands (awards of punitive or multiple damages may well be held to be contrary to public policy). A Cayman Islands court, including the Grand Court of the Cayman Islands, may stay proceedings if concurrent proceedings are being brought elsewhere, which would delay proceedings and make it more difficult for our shareholders to bring action against us.

***If securities or industry analysts cease coverage of us or do not publish research, or publish inaccurate or unfavorable research, about our business, the price of our ordinary shares and trading volume could decline.***

The trading market for our ordinary shares depends in part on the research and reports that securities or industry analysts publish about us or our business. If few securities analysts commence coverage of us, or if industry analysts cease coverage of us, the trading price for our ordinary shares could be negatively affected. If one or more of the analysts who cover us downgrade our ordinary shares or publish inaccurate or unfavorable research about our business or if our results fail to meet the expectations of these analysts, the price of our ordinary shares would likely decline. If one or more of these analysts cease coverage of us or fail to publish reports on us regularly, demand for our ordinary shares could decrease, which might cause our share price and trading volume to decline.

***We do not anticipate paying any cash dividends on our capital shares in the foreseeable future; as a result, capital appreciation, if any, of our ordinary shares will be your sole source of gain for the foreseeable future.***

We have never declared or paid cash dividends on our capital shares. We do not anticipate paying any cash dividends on our capital shares in the foreseeable future. We currently intend to retain all available funds and any future earnings to fund the development and growth of our business. In addition, the terms of any future debt financing arrangement may contain terms prohibiting or limiting the amount of dividends that may be declared or paid on our ordinary shares. As a result, capital appreciation, if any, of our ordinary shares will be your sole source of gain for the foreseeable future.

#### **ADDITIONAL RISKS RELATING TO THIS OFFERING**

***Our management team may invest or spend the net proceeds of this offering in ways with which you may not agree or in ways which may not yield a significant return.***

Our management will have broad discretion over the use of the net proceeds from this offering. We intend to use the net proceeds from the sale of ordinary shares offered by this prospectus supplement for general corporate purposes, which may include, among other things, research activities, preclinical and clinical development of existing product candidates, manufacture of pre-clinical, clinical and commercial drug supplies, selling and marketing expenses, capital expenditures, working capital, general and administrative expenses and acquisitions of technology or drug candidates. We have not determined the amounts we plan to spend on any of these items or the timing of these expenditures. We do not currently have any commitments with regard to any such acquisitions or other strategic transactions. Our management will have considerable discretion in the application of the net proceeds, and you will not have the opportunity, as part of your investment decision, to assess whether the proceeds are being used appropriately. The net proceeds may be used for corporate purposes that do not increase our operating results or enhance the value of our ordinary shares.

***If you purchase our ordinary shares in this offering, you will suffer immediate dilution of your investment.***

The assumed public offering price of our ordinary shares in this offering is substantially higher than the as adjusted net tangible book value per ordinary share. Therefore, if you purchase our ordinary shares in this offering, you will pay a price per share that substantially exceeds our as adjusted net tangible book value per share after this offering. Based on an assumed public offering price of \$30.65 per share, the closing price of our ordinary shares as reported on The Nasdaq Global Market on February 7, 2020, you will experience immediate dilution of \$31.35 per share, representing the difference between our as adjusted net tangible book value per share after this offering and the assumed public offering price. In addition, to the extent outstanding options or warrants to purchase ordinary shares are exercised or restricted stock units are settled in ordinary shares, or if our outstanding convertible senior notes are settled in shares, there will be further dilution to investors in this offering. In addition, if the underwriters exercise their option to purchase additional ordinary shares in full, or if we issued additional equity securities, you will experience additional dilution. See "Dilution" for a more detailed description of the dilution to investors in the offering.

***You may experience future dilution as a result of future equity or equity-linked offerings.***

In order to raise additional capital, we may in the future offer additional ordinary shares or other securities convertible into or exchangeable for our ordinary shares. We cannot assure you that we will be able to sell shares or other securities in any other offering at a price per share that is equal to or greater than the price per share paid by investors in this offering, and investors purchasing shares or other securities in the future could have rights superior to existing shareholders. The price per share at which we sell additional ordinary shares or other securities convertible into or exchangeable for our ordinary shares in future transactions may be higher or lower than the price per share in this offering.

***If a United States person is treated as owning at least 10% of our ordinary shares, such United States person may be subject to adverse U.S. federal income tax consequences.***

For U.S. federal income tax purposes, if a United States person is treated as owning (directly, indirectly or constructively) at least 10% of the value or voting power of our ordinary shares, such U.S. holder will be treated as a "United States shareholder" with respect to each "controlled foreign corporation" in our group (if any). Because our group includes at least one U.S. subsidiary, our non-U.S. subsidiaries and any non-U.S. subsidiaries we were to form or acquire in the future generally would be treated as controlled foreign corporations. A United States shareholder of a controlled foreign corporation will be required to annually report and include in its U.S. taxable income its pro rata share of "subpart F income," "global intangible low-taxed income" and investments in U.S. property by controlled foreign corporations, regardless of whether we make any distributions. An individual that is a United States shareholder with respect to a controlled foreign corporation generally will not be allowed certain tax deductions or foreign tax credits that are available to a United States shareholder that is a domestic corporation. Failure to comply with such reporting obligations may subject a holder of our ordinary shares that is a United States shareholder to significant monetary penalties and may prevent the statute of limitations with respect to your U.S. federal income tax return for the year for which reporting was due from starting. Holders of our ordinary shares that are United States persons should consult their tax advisors regarding the potential application of these rules to their investment in our ordinary shares.