
**UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
WASHINGTON, D.C. 20549**

**FORM S-3
REGISTRATION STATEMENT
UNDER
THE SECURITIES ACT OF 1933**

KALVISTA PHARMACEUTICALS, INC.
(Exact name of registrant as specified in its charter)

Delaware
(State or other jurisdiction of
incorporation or organization)

20-0915291
(I.R.S. Employer
Identification No.)

**One Kendall Square,
Bld 200, Ste 2203
Cambridge, MA 02139
(857) 999-0075**
(Address, including zip code, and telephone number, including area code, of registrant's principal executive offices)

**Thomas Andrew Crockett
Chief Executive Officer
KalVista Pharmaceuticals, Inc.
One Kendall Square
Bld 200, Ste 2203
Cambridge, MA 02139
(857) 999-0075**
(Name, address, including zip code, and telephone number, including area code, of agent for service)

Copy to:
**Robert A. Freedman, Esq.
Fenwick & West LLP
801 California Street
Mountain View, CA 94041
(650) 988-8500**

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

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

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

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

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

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

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

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, or a smaller reporting company. See the definitions of "large accelerated filer," "accelerated filer" and "smaller reporting company" in Rule 12b-2 of the Exchange Act. (Check one):

Large accelerated filer Accelerated filer
Non-accelerated filer (Do not check if a smaller reporting company) Smaller reporting company

CALCULATION OF REGISTRATION FEE

Title of Each Class of Securities to be Registered	Amount to be Registered(1)	Proposed Maximum Offering Price Per Share(2)	Proposed Maximum Aggregate Offering Price	Amount of Registration Fee
Common Stock, \$0.001 par value per share	7,827,258	\$6.72	\$52,599,173.76	\$6,096.24

- (1) Pursuant to Rule 416 under the Securities Act of 1933, as amended (the "Securities Act"), this registration statement also covers any additional securities that may be offered or issued in connection with any stock split, stock dividend or pursuant to anti-dilution provisions of any of the securities.
- (2) Estimated solely for purposes of calculating the registration fee pursuant to Rule 457(c) under the Securities Act and based upon the average of the high and low prices on the NASDAQ Global Market on December 13, 2016.

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

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The information in this prospectus is not complete and may be changed. The selling stockholders named in this prospectus may not sell these securities until the registration statement filed with the Securities and Exchange Commission is effective. This prospectus is not an offer to sell these securities and the selling stockholders named in this prospectus are not soliciting offers to buy these securities in any jurisdiction where the offer or sale is not permitted.

Subject to completion, dated December 20, 2016

PROSPECTUS



KALVISTA PHARMACEUTICALS, INC.

7,827,258 SHARES OF COMMON STOCK

This prospectus relates to the possible resale from time to time of up to 7,827,258 shares of common stock of KalVista Pharmaceuticals, Inc. by the selling stockholders identified in this prospectus. We will not receive any proceeds from the sale of the shares offered by this prospectus.

We have agreed to bear all of the expenses incurred in connection with the registration of these shares. The selling stockholders will pay or assume underwriting discounts and selling commissions and similar charges incurred for the sale of shares of our common stock.

You should read this prospectus, the information incorporated, or deemed to be incorporated, by reference in this prospectus, and any applicable prospectus supplement and related free writing prospectus carefully before you invest.

The selling stockholders identified in this prospectus, or their respective pledgees, donees, permitted transferees or other successors-in-interest, may offer the shares from time to time through public or private transactions at prevailing market prices, at prices related to prevailing market prices or at privately negotiated prices. See "Plan of Distribution" beginning on page 8.

Our common stock is currently traded on the NASDAQ Global Market under the symbol "KALV." On December 19, 2016, the closing sale price of our common stock on the NASDAQ Global Market was \$6.91 per share. You are urged to obtain current market quotations for our common stock.

Investing in our common stock involves a high degree of risk. See "[Risk Factors](#)" beginning on page 2.

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

The date of this prospectus is _____, 2016.

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We have not authorized anyone to provide you with information different from that contained or incorporated by reference in this prospectus. The selling stockholders are offering to sell, and seeking offers to buy, shares of our common stock only in jurisdictions where offers and sales are permitted. The information contained in this prospectus is accurate only as of the date of this prospectus, regardless of the time of delivery of this prospectus or of any sale of common stock.

PROSPECTUS SUMMARY

This summary highlights important features of this offering and the information included or incorporated by reference in this prospectus. This summary may not contain all of the information that is important to you. You should read the entire prospectus carefully, including “Risk Factors,” before deciding to invest in our common stock.

KalVista Pharmaceuticals, Inc.

We are a pharmaceuticals company focused on the discovery, development, and commercialization of small molecule serine protease inhibitors as new treatments for diseases with significant unmet needs.

Our initial focus is on inhibitors of plasma kallikrein, which is an important component of the body’s inflammatory response, and which in excess can lead to increased vascular permeability, edema and inflammation. We have developed a proprietary portfolio of novel, small molecule plasma kallikrein inhibitors initially targeting hereditary angioedema (“**HAE**”) and diabetic macular edema (“**DME**”). In August 2016, we commenced a Phase I first-in-human clinical trial for KVD818, the first of our orally delivered molecules for the treatment of HAE. Our most advanced program, an intravitreally administered plasma kallikrein inhibitor known as KVD001, has successfully completed its first-in-human study in patients with DME and is being prepared for Phase 2 studies in 2017.

Corporate Information

We were incorporated in the State of Delaware on March 26, 2004 as Sentrx Surgical, Inc. Our name changed to Carbylan Biosurgery, Inc. on December 14, 2005 and to Carbylan Therapeutics, Inc. on March 7, 2014. In June 2016, we entered into a definitive share purchase agreement (“**Share Purchase Agreement**”), with KalVista Pharmaceuticals Ltd. (“**KalVista Limited**”), a private company limited by shares incorporated and registered in England and Wales and the shareholders of KalVista Limited, pursuant to which the shareholders of KalVista Limited became the majority owners of the company. We changed our name to KalVista Pharmaceuticals, Inc. on November 21, 2016 in connection with the completion of the share purchase transaction. Our principal executive offices are located at One Kendall Square, Bld 200, Ste 2203, Cambridge, MA 02139, and our telephone number is (857) 999-0075. Our website address is www.kalvista.com. The information contained on, or that can be accessed through, our website is not a part of this prospectus. We have included our website address in this prospectus solely as an inactive textual reference. Unless the context otherwise requires, references in this prospectus to “KalVista,” “we,” “us,” and “our” refer to KalVista Pharmaceuticals, Inc.

The trademarks, trade names and service marks appearing in this prospectus are the property of their respective owners.

The Offering

Common stock offered by selling stockholders	7,827,258 shares
Use of proceeds	We will not receive any proceeds from the sale of shares in this offering.
NASDAQ Global Market symbol	KALV

RISK FACTORS

An investment in our common stock involves a high degree of risk. Before deciding whether to invest in our common stock, you should consider carefully the risks and uncertainties described under the section captioned “Risk Factors” contained in our definitive proxy statement filed on October 28, 2016 and our most recent Quarterly Report on Form 10-Q and other filings we make with the SEC from time to time, which are incorporated by reference herein in their entirety, together with other information in this prospectus and in the documents incorporated by reference in this prospectus. If any of these risks actually occurs, our business, financial condition or results of operations could suffer materially. In such event, the trading price of our common stock could decline and you might lose all or part of your investment.

SPECIAL NOTE REGARDING FORWARD-LOOKING INFORMATION

This prospectus and the documents we incorporate by reference herein contain forward-looking statements within the meaning of Section 27A of the Securities Act of 1933, as amended, or the Securities Act, and Section 21E of the Securities Exchange Act of 1934, as amended, or the Exchange Act. All statements, other than statements of historical fact, included or incorporated in this prospectus regarding our strategy, future operations, clinical trials, collaborations, intellectual property, cash resources, financial position, future revenues, projected costs, prospects, plans, and objectives of management are forward-looking statements. The words “believes,” “anticipates,” “estimates,” “plans,” “expects,” “intends,” “may,” “could,” “should,” “potential,” “likely,” “projects,” “continue,” “will,” and “would” and similar expressions are intended to identify forward-looking statements, although not all forward-looking statements contain these identifying words. We cannot guarantee that we actually will achieve the plans, intentions or expectations disclosed in our forward-looking statements and you should not place undue reliance on our forward-looking statements. There are a number of important factors that could cause our actual results to differ materially from those indicated or implied by forward-looking statements. See “Risk Factors” contained in our definitive proxy statement filed on October 28, 2016, our most recent Quarterly Report on Form 10-Q and in this prospectus for more information. These factors and the other cautionary statements made in this prospectus and the documents we incorporate by reference should be read as being applicable to all related forward-looking statements whenever they appear in this prospectus and the documents we incorporate by reference. In addition, any forward-looking statements represent our estimates only as of the date that this prospectus is filed with the SEC and should not be relied upon as representing our estimates as of any subsequent date. We do not assume any obligation to update any forward-looking statements. We disclaim any intention or obligation to update or revise any forward-looking statement, whether as a result of new information, future events or otherwise.

USE OF PROCEEDS

We will not receive any proceeds from the sale of the shares offered pursuant to this prospectus. The selling stockholders will receive all of the proceeds from the sale of the shares of common stock offered by this prospectus. For information about the selling stockholders, see “Selling Stockholders.”

The selling stockholders will pay any underwriting discounts and selling commissions and expenses incurred by the selling stockholders for brokerage services or any other expenses incurred by the selling stockholders in disposing of the shares. We will bear all other costs, fees and expenses incurred in effecting the registration of the shares covered by this prospectus, including all registration and filing fees and fees and expenses of our counsel and accountants and legal expenses of the selling stockholders.

SELLING STOCKHOLDERS

The table below sets forth, to our knowledge, information concerning the beneficial ownership of shares of our common stock by the selling stockholders as of December 2, 2016.

The information in the table below with respect to the selling stockholders has been obtained from the selling stockholders. When we refer to the “selling stockholders” in this prospectus, we mean the selling stockholders listed in the table below as offering shares, as well as their respective pledgees, donees, transferees or other successors-in-interest.

We do not know if, when or in what amounts the selling stockholders may offer their shares for sale. The selling stockholders may sell some, all or none of the shares offered by this prospectus. Because the number of shares the selling stockholders may offer and sell is not presently known, and because there are currently no agreements, arrangements or understandings with respect to the sale of any of the shares, we cannot estimate the number of shares that will be held by each selling stockholder after completion of this offering. This table, however, presents the maximum number of shares of common stock that the selling stockholders may offer pursuant to this prospectus and the number of shares of common stock that would be beneficially owned after the sale of the maximum number of shares of common stock by each selling stockholder.

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Beneficial ownership is determined in accordance with the rules of the SEC, and includes voting or investment power with respect to shares. Unless otherwise indicated below, to our knowledge, each selling stockholder named in the table has sole voting and investment power with respect to the shares of common stock beneficially owned by it. The inclusion of any shares in this table does not constitute an admission of beneficial ownership for any selling stockholder named below.

Name of Selling Stockholder	Shares of Common Stock Beneficially Owned Prior to Offering		Shares of Common Stock Being Offered Number (1)	Shares of Common Stock to be Beneficially Owned After Offering	
	Number (1)	Percentage (2)		Number (1)	Percentage (2)
Clive Balcombe	2,911	*%	2,911	—	— %
Blackwell Partners LLC – Series A	104,619	1.08	104,619	—	—
Gary Cook	16,532	*	16,532	—	—
Thomas Andrew Crockett (3)	281,420	2.90	281,420	—	—
Stephen Donnelly	55,701	*	55,701	—	—
Edward Feener (4)	98,034	1.01	98,034	—	—
Robert Haigh	36,957	*	36,957	—	—
Helen Hernandez	21,287	*	21,287	—	—
Simon Hodgson	8,296	*	8,296	—	—
International Biotechnology Trust plc	322,436	3.32	322,436	—	—
Longwood Fund II LP (5)	369,419	3.08	369,419	—	—
Marlene Modi	9,635	*	9,635	—	—
Rachel Morten	15,596	*	15,596	—	—
MVM Executive Limited	29	*	29	—	—
MVM Fund III (No. 2) Limited Partnership	126	*	126	—	—
MVM Fund III L.P.	2,556	*	2,556	—	—
MVM International Life Sciences Fund No. 1 L.P.	2,971	*	2,971	—	—
Novo A/S (6)	2,901,927	29.88	2,901,927	—	—
RA Capital Healthcare Fund, L.P. (7)	486,451	5.01	486,451	—	—
Michael Roe	15,216	*	15,216	—	—
SV Life Sciences Fund IV, L.P. (8)	2,508,279	25.82	2,508,279	—	—
SV Life Sciences Fund IV Strategic Partners, L.P. (9)	71,211	*	71,211	—	—
Robert Tansley	23,289	*	23,289	—	—
Vantia Limited	89,139	*	89,139	—	—
VCHP Co-Investment Holdings II LLC	63,946	*	63,946	—	—
Venrock Healthcare Capital Partners II LP	157,705	1.62	157,705	—	—
Lloyd Aiello	78,601	*	78,601	—	—
Christopher Yea Ph.D. (10)	82,969	*	82,969	—	—

* represents beneficial ownership of less than 1% of our outstanding shares of common stock

- (1) The number of shares reported in this column includes shares issuable pursuant to the share purchase agreement, dated June 15, 2016, that we entered into with the selling stockholders (the “**Share Purchase Agreement**”).
- (2) Based on 9,713,042 shares of our common stock outstanding on December 2, 2016.
- (3) Mr. Thomas Andrew Crockett is one of our directors and serves as our Chief Executive Officer.
- (4) Mr. Edward Feener, Ph.D. serves as our Chief Scientific Officer.
- (5) Longwood Fund II GP, LLC (the “**Fund II General Partner**”) is the general partner of Longwood Fund II, L.P. and exercises voting and investment power with respect to securities owned directly by Longwood

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Fund II, L.P. Longwood Fund II, L.P. is managed by Longwood Fund Management, LLC. Mr. Richard Aldrich, one of our directors, is a managing member of Longwood Fund Management LLC. Michelle Dipp, M.D., Ph.D., Christoph Westphal, M.D. and Mr. Aldrich are the managers of the Fund II General Partner and share voting and dispositive power with respect to the securities held by Longwood Fund II, L.P., each of whom disclaims beneficial ownership of the shares held by Longwood Fund II, L.P. except to the extent of her or his pecuniary interest therein.

- (6) Novo A/S, a Danish limited liability company, is wholly owned by Novo Nordisk Foundation (the “**Foundation**”), a Danish commercial foundation. Novo A/S is the holding company in the group of Novo companies (currently comprised of Novo Nordisk A/S, Novoxymes A/S and NNIT A/S and is responsible for managing the Foundation’s assets, including its financial assets. Novo A/S through its Board of Directors (the “**Novo Board**”), has the sole power to vote and dispose of the Novo Shares. The Novo Board, currently comprised of Sten Scheibye, Goran Ando, Jeppe Christiansen, Steen Riisgaard and Per Wold-Olsen, may exercise voting and dispositive control over the Novo Shares only with the support of a majority of the Novo Board. As such, no individual member of the Novo Board is deemed to hold any beneficial ownership or reportable pecuniary interest in the Novo Shares.
- (7) RA Capital Healthcare Fund, L.P., whose general partner is RA Capital Management, LLC and Peter Kolchinsky is Managing Member of RA Capital Management, LLC. Shared voting or investment power is held by RA Capital Management, LLC, as the General Partner of RA Capital Healthcare Fund, L.P., and Mr. Kolchinsky as Managing Member of RA Capital Management, LLC. Mr. Rajeev Shah, one of our directors, is a Portfolio Manager and Managing Director of RA Capital Management, LLC.
- (8) The general partner of SV Life Sciences Fund IV, L.P. (the “**Fund**”) is SV Life Sciences Fund IV (GP), L.P. The general partner of SV Life Sciences Fund IV (GP), L.P. is SVLSF IV, LLC. Both SV Life Sciences Fund IV (GP), L.P. and SVLS IV, LLC may be deemed to beneficially own the shares held by the Fund. SV Life Sciences Fund IV (GP), L.P. and SVLS IV, LLC disclaim beneficial ownership of the shares held by the Fund except to the extent of any pecuniary interest therein. The Investment Committee of SVLSF IV, LLC is comprised of Kate Bingham, James Garvey, Eugene F. Hill, III, David Milne and Michael Ross. Ph.D. Investment and divestment decisions for the Fund are based on majority vote of the Investment Committee. Dr. Joshua Resnick, one of our directors, is a partner of the Fund.
- (9) The general partner of SV Life Sciences Fund IV Strategic Partners, L.P. (the “**Fund I**”) is SV Life Sciences Fund IV (GP), L.P. The general partner of SV Life Sciences Fund IV (GP), L.P. is SVLSF IV, LLC. Both SV Life Sciences Fund IV (GP), L.P. and SVLS IV, LLC may be deemed to beneficially own the shares held by the Fund I. SV Life Sciences Fund IV (GP), L.P. and SVLS IV, LLC disclaim beneficial ownership of the shares held by the Fund I except to the extent of any pecuniary interest therein. The Investment Committee of SVLSF IV, LLC is comprised of Kate Bingham, James Garvey, Eugene F. Hill, III, David Milne and Michael Ross. Ph.D. Investment and divestment decisions for the Fund I are based on majority vote of the Investment Committee. Dr. Joshua Resnick, one of our directors, is a partner of the Fund I.
- (10) Mr. Christopher Yea, Ph.D. serves as our Chief Development Officer.

Relationships with the Selling Stockholders

2016 Private Placement

On June 15, 2016, we entered into a share purchase agreement with the selling stockholders (the “**Share Purchase Agreement**”), pursuant to which, among other things, each selling stockholder agreed to sell to us, and we agreed to purchase from each selling stockholder, all of the ordinary and preferred shares of KalVista Pharmaceuticals Ltd., a private company limited by shares incorporated and registered in England and Wales (“**KalVista Limited**”) owned by such selling stockholder in exchange for the issuance of a certain number of our shares of common stock as determined pursuant to the Share Purchase Agreement (the “**Transaction**”). We agreed to issue and sell to the selling stockholders an aggregate of 7,827,258 of our common stock in a private placement financing.

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As a result of the consummation of the Transaction, and after giving effect to a 14-for-1 reverse stock split, each outstanding share of KalVista Limited ordinary and preferred shares then outstanding was canceled and automatically converted into and became the right to receive approximately 0.29112 shares of our common stock. The exchange ratio was calculated by a formula that was determined through arms-length negotiations between us and KalVista Limited. In connection with the Transaction and in accordance with the Registration Rights Agreement, defined below, we have filed this registration statement to register the shares of our common stock received by the selling stockholders in the Transaction for resale in the public markets.

Concurrently with the execution of the Share Purchase Agreement, we entered into a registration rights agreement with the selling stockholders relating to the registration for resale of the shares of our common stock received by the selling stockholders in the private placement (the “**Registration Rights Agreement**”). The Registration Rights Agreement contains customary covenants and agreements by us, and customary indemnification obligations of us and the selling stockholders, including for liabilities under the Securities Act. The registration statement of which this prospectus is a part has been filed in accordance with the Registration Rights Agreement.

The foregoing summary descriptions of the Share Purchase Agreement and the Registration Rights Agreement do not purport to be complete and are qualified in their entirety by reference to the full text of such agreements, which were filed as exhibits to our Current Report on Form 8-K, dated November 21, 2016, and are incorporated by reference herein.

PLAN OF DISTRIBUTION

The shares of common stock listed in the table appearing under “Selling Stockholders” are being registered to permit public secondary trading of these shares by the holders of such shares from time to time after the date of this prospectus. Registration of the shares of common stock covered by this prospectus does not mean, however, that those shares necessarily will be offered or sold. We will not receive any of the proceeds from the sale of the common stock by the selling stockholders. To our knowledge, the selling stockholders have not entered into any arrangements or understandings with any underwriter, broker-dealer or agent with respect to the sale of the shares covered by this prospectus.

The selling stockholders may sell such shares from time to time directly to purchasers (including pledgees) or through underwriters, broker-dealers or agents, at market prices prevailing at the time of sale, at prices related to such market prices, at a fixed price or prices subject to change or at negotiated prices, by a variety of methods including the following:

- through The NASDAQ Stock Market or on any national securities exchange or quotation service on which the shares of common stock may be listed or quoted at the time of sale;
- in the over-the-counter market;
- in transactions otherwise than on such exchanges or services or in the over-the-counter market;
- through the exercise of purchased or written options;
- through a combination of any such methods; or
- through any other method permitted under applicable law and our insider trading policy.

In effecting sales, brokers or dealers engaged by the selling stockholders may arrange for other brokers or dealers to participate. Broker-dealers may receive commissions or discounts from the selling stockholders (or, if any broker-dealer acts as agent for the purchaser of shares, from the purchaser) in amounts to be negotiated. Broker-dealer transactions may include:

- a block trade in which a broker-dealer may resell all or part of the block, as principal or agent, in order to facilitate the transaction;
- purchases by a broker-dealer, as principal, and a subsequent resale by the broker-dealer for its account;
- pledges of shares to a broker-dealer, who may, in the event of default, purchase or sell the pledged shares; or
- ordinary brokerage transactions and transactions in which a broker solicits purchasers on behalf of the selling stockholders.

In addition, selling stockholders who are neither an employee of ours nor otherwise subject to our insider trading policy may enter into option, derivative or hedging transactions with respect to the shares, and any related offers or sales of shares may be made pursuant to this prospectus. For example, the selling stockholders may:

- enter into transactions involving short sales of the shares by broker-dealers in the course of hedging the positions they assume with selling stockholders;
- sell shares short themselves and deliver the shares registered hereby to settle such short sales or to close out stock loans incurred in connection with their short positions;
- write call options, put options or other derivative instruments (including exchange-traded options or privately negotiated options) with respect to the shares, or which they settle through delivery of the shares;
- enter into option transactions or other types of transactions that require the selling stockholder to deliver shares to a broker, dealer or other financial institution, who may then resell or transfer the shares under this prospectus; or
- lend the shares to a broker, dealer or other financial institution, which may sell the lent shares.

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These option, derivative and hedging transactions may require the delivery to a broker, dealer or other financial institution of shares offered hereby, and such broker, dealer or other financial institution may resell such shares pursuant to this prospectus.

Brokers, dealers, agents or underwriters participating in transactions as agent may receive compensation in the form of discounts, concessions or commissions from the selling stockholders (and, if they act as agent for the purchaser of the shares, from such purchaser). The discounts, concessions or commissions as to a particular broker, dealer, agent or underwriter might be in excess of those customary in the type of transaction involved.

The selling stockholders and any underwriters, brokers, dealers or agents that participate in such distribution may be deemed to be “underwriters” within the meaning of the Securities Act, and any discounts, commissions or concessions received by any underwriters, brokers, dealers or agents might be deemed to be underwriting discounts and commissions under the Securities Act. Neither we nor the selling stockholders can presently estimate the amount of such compensation. Any selling stockholder who is an “underwriter” within the meaning of the Securities Act will be subject to the prospectus delivery requirements of the Securities Act and the provisions of the Exchange Act and the rules thereunder relating to stock manipulation. The selling stockholders may indemnify underwriters, brokers, dealers or agents that participate in transactions involving sales of the shares against specific liabilities, including liabilities arising under the Securities Act.

We will pay substantially all of the expenses incident to this offering of the shares by the selling stockholders to the public other than commissions and discounts of underwriters, brokers, dealers or agents.

In order to comply with certain states’ securities laws, if applicable, the shares sold in those jurisdictions may only be sold through registered or licensed brokers or dealers. In addition, in certain states, the shares may not be sold unless the shares have been registered or qualified for sale in that state or an exemption from registration or qualification is available and is complied with.

We do not assure you that the selling stockholders will sell any or all of the shares offered by them pursuant to this prospectus. In addition, we do not assure you that the selling stockholders will not transfer, devise or gift the shares by other means not described in this prospectus. Moreover, any shares of common stock covered by this prospectus that qualify for sale pursuant to Rule 144 may be sold under Rule 144 rather than pursuant to this prospectus.

We may suspend the use of this prospectus for a limited period of time if (a) suspension is necessary to delay the disclosure of material non-public information concerning us, the disclosure of which at the time is not, in our good faith opinion, in our best interest, (b) suspension is necessary to amend or supplement the prospectus so that it does not include an untrue statement of a material fact or omit to state a material fact required to be stated herein or necessary to make the statements herein, or in light of the circumstances under which they were made, not misleading, (c) it would be materially detrimental to us to maintain the prospectus, or (d) it is in our best interests to suspend sales under such registration at such time. If these types of events occur, a prospectus supplement or post-effective amendment, if required, will be distributed to each selling stockholder.

DESCRIPTION OF CAPITAL STOCK

The following description of our capital stock is intended as a summary only and therefore is not complete. This description is based upon, and is qualified by reference to, our Amended and Restated Certificate of Incorporation and our Amended and Restated Bylaws, each as amended from time to time, and by applicable provisions of Delaware corporate law. You should read our Amended and Restated Certificate of Incorporation and our Amended and Restated Bylaws, which are filed as exhibits to the registration statement of which this prospectus forms a part, for the provisions that are important to you.

Our authorized capital stock consists of 100,000,000 shares of common stock, \$0.001 par value per share and 5,000,000 shares of preferred stock, \$0.001 par value per share. As of December 2, 2016, 9,925,214 shares of common stock were outstanding and no shares of preferred stock were outstanding.

Common Stock

Voting

Holders of our common stock are entitled to one vote for each share held of record on all matters submitted to a vote of the stockholders, including the election of directors, and do not have cumulative voting rights. Accordingly, the holders of a majority of the shares of our common stock entitled to vote in any election of directors can elect all of the directors standing for election.

Dividends

Subject to preferences that may be applicable to any then outstanding preferred stock, the holders of common stock are entitled to receive dividends, if any, as may be declared from time to time by our board of directors out of legally available funds.

Liquidation

In the event of our liquidation, dissolution or winding up, holders of our common stock will be entitled to share ratably in the net assets legally available for distribution to stockholders after the payment of all of our debts and other liabilities, subject to the satisfaction of any liquidation preference granted to the holders of any outstanding shares of preferred stock.

Rights and Preferences

Holders of our common stock have no preemptive, conversion or subscription rights, and there are no redemption or sinking fund provisions applicable to our common stock. The rights, preferences and privileges of the holders of our common stock are subject to, and may be adversely affected by, the rights of the holders of shares of any series of our preferred stock that we may designate and issue in the future.

Fully Paid and Nonassessable

All of our outstanding shares of common stock are, and the shares of common stock to be issued in this offering will be, fully paid and nonassessable.

Transfer Agent and Registrar

American Stock Transfer & Trust Company, LLC is our transfer agent and registrar for the common stock.

The NASDAQ Global Market

Our common stock is listed on The NASDAQ Stock Market under the symbol “KALV.”

Preferred Stock

Under the terms of our Amended and Restated Certificate of Incorporation, our board of directors have the authority, without further action by our stockholders, to issue up to 5,000,000 shares of preferred stock in one or more series, to establish from time to time the number of shares to be included in each such series, to fix the rights, preferences and privileges of the shares of each wholly unissued series and any qualifications, limitations or restrictions thereon, and to increase or decrease the number of shares of any such series, but not below the number of shares of such series then outstanding.

Our board of directors may authorize the issuance of preferred stock with voting or conversion rights that could adversely affect the voting power or other rights of the holders of our common stock. The purpose of authorizing our board of directors to issue preferred stock and determine its rights and preferences is to eliminate delays associated with a stockholder vote on specific issuances. The issuance of preferred stock, while providing flexibility in connection with possible acquisitions and other corporate purposes, could, among other things, have the effect of delaying, deferring or preventing a change in control of us and may adversely affect the market price of our common stock and the voting and other rights of the holders of our common stock. It is not possible to state the actual effect of the issuance of any shares of preferred stock on the rights of holders of common stock until the board of directors determines the specific rights attached to that preferred stock.

Anti-Takeover Effects of Provisions of Our Amended and Restated Certificate of Incorporation, Our Bylaws and Delaware Law

Delaware Anti-Takeover Law

We are subject to the provisions of Section 203 of the Delaware General Corporation Law. In general, Section 203 prohibits a publicly-held Delaware corporation from engaging in a “business combination” with an “interested stockholder” for a three-year period following the time that this stockholder becomes an interested stockholder, unless the business combination is approved in a prescribed manner. A “business combination” includes, among other things, a merger, asset or stock sale or other transaction resulting in a financial benefit to the interested stockholder. An “interested stockholder” is a person who, together with affiliates and associates, owns, or did own within three years prior to the determination of interested stockholder status, 15% or more of the corporation’s voting stock.

Under Section 203, a business combination between a corporation and an interested stockholder is prohibited unless it satisfies one of the following conditions: before the stockholder became interested, the board of directors approved either the business combination or the transaction which resulted in the stockholder becoming an interested stockholder; upon closing of the transaction which resulted in the stockholder becoming an interested stockholder, the interested stockholder owned at least 85% of the voting stock of the corporation outstanding at the time the transaction commenced, excluding for purposes of determining the voting stock outstanding, shares owned by persons who are directors and also officers, and employee stock plans, in some instances; or at or after the time the stockholder became interested, the business combination was approved by the board of directors of the corporation and authorized at an annual or special meeting of the stockholders by the affirmative vote of at least two-thirds of the outstanding voting stock which is not owned by the interested stockholder.

A Delaware corporation may “opt out” of these provisions with an express provision in its original certificate of incorporation or an express provision in its certificate of incorporation or bylaws resulting from a stockholders’ amendment approved by at least a majority of the outstanding voting shares. We have not opted out of these provisions. As a result, mergers or other takeover or change in control attempts of us may be discouraged or prevented.

Amended and Restated Certificate of Incorporation and Amended and Restated Bylaws

Our certificate of incorporation and bylaws will contain certain provisions that are intended to enhance the likelihood of continuity and stability in the composition of the board of directors and which may have the effect of delaying, deferring or preventing a future takeover or change in control of the company unless such takeover or change in control is approved by the board of directors.

These provisions include:

Classified Board. Our certificate of incorporation provides that our board of directors will be divided into three classes of directors, with the classes as nearly equal in number as possible. As a result, approximately one-third of our board of directors will be elected each year. The classification of directors will have the effect of making it more difficult for stockholders to change the composition of our board. Our bylaws also provide that, subject to any rights of holders of preferred stock to elect additional directors under specified circumstances, the number of directors will be fixed exclusively pursuant to a resolution adopted by our board of directors.

Action by Written Consent; Special Meetings of Stockholders. Our certificate of incorporation provides that stockholder action can be taken only at an annual or special meeting of stockholders and cannot be taken by written consent in lieu of a meeting. Our bylaws also provide that, subject to any special rights of the holders of any series of preferred stock, and to the requirements of applicable law, special meetings of the stockholders can be called only by or at the direction of the board of directors pursuant to a resolution adopted by a majority of the total number of directors which our board of directors would have if there were no vacancies. Except as described above, stockholders are not permitted to call a special meeting or to require the board of directors to call a special meeting.

Removal of Directors. Our bylaws provides that our directors may be removed only for cause by the affirmative vote of at least 66 2/3% of the voting power of our voting stock, voting together as a single class. This requirement of a supermajority vote to remove directors could enable a minority of our stockholders to prevent a change in the composition of our board.

Advance Notice Procedures. Our bylaws establish an advance notice procedure for stockholder proposals to be brought before an annual meeting of our stockholders, including proposed nominations of persons for election to the board of directors. Stockholders at an annual meeting are only able to consider proposals or nominations specified in the notice of meeting or brought before the meeting by or at the direction of the board of directors or by a stockholder who was a stockholder of record on the record date for the meeting, who is entitled to vote at the meeting and who has given our Secretary timely written notice, in proper form, of the stockholder's intention to bring that business before the meeting. Although the bylaws do not give the board of directors the power to approve or disapprove stockholder nominations of candidates or proposals regarding other business to be conducted at a special or annual meeting, the bylaws may have the effect of precluding the conduct of certain business at a meeting if the proper procedures are not followed or may discourage or deter a potential acquirer from conducting a solicitation of proxies to elect its own slate of directors or otherwise attempting to obtain control of the company.

Super Majority Approval Requirements. The Delaware General Corporation Law generally provides that the affirmative vote of a majority of the shares entitled to vote on any matter is required to amend a corporation's certificate of incorporation or bylaws, unless either a corporation's certificate of incorporation or bylaws requires a greater percentage. Our certificate of incorporation and bylaws provide that the affirmative vote of holders of at least 66 2/3% of the total votes eligible to be cast in the election of directors will be required to amend, alter, change or repeal certain provisions of the certificate of incorporation and bylaws. This requirement of a supermajority vote to approve amendments to certain provisions of our certificate of incorporation and bylaws could enable a minority of our stockholders to exercise veto power over any such amendments.

Authorized but Unissued Shares. Our authorized but unissued shares of common stock and preferred stock are available for future issuance without stockholder approval. These additional shares may be utilized for a

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variety of corporate purposes, including future public offerings to raise additional capital, corporate acquisitions and employee benefit plans. The existence of authorized but unissued shares of common stock and preferred stock could render more difficult or discourage an attempt to obtain control of a majority of our common stock by means of a proxy contest, tender offer, merger or otherwise.

Exclusive Forum. Our certificate of incorporation provides that, to the fullest extent permitted by applicable law, the Court of Chancery of the State of Delaware will be the sole and exclusive forum for (i) any derivative action or proceeding brought on our behalf, (ii) any action asserting a claim of breach of a fiduciary duty owed by any of our directors, officers or other employees to us or our stockholders, (iii) any action asserting a claim against us arising pursuant to any provision of the Delaware General Corporation Law, our certificate of incorporation or our bylaws, or (iv) any other action asserting a claim against us that is governed by the internal affairs doctrine. Any person or entity purchasing or otherwise acquiring any interest in shares of our capital stock shall be deemed to have notice of and to have consented to the provisions of our certificate of incorporation described above. Although we believe these provisions benefit us by providing increased consistency in the application of Delaware law for the specified types of actions and proceedings, the provisions may have the effect of discouraging lawsuits against our directors and officers. The enforceability of similar choice of forum provisions in other companies' certificates of incorporation has been challenged in legal proceedings, and it is possible that, in connection with one or more actions or proceedings described above, a court could find the choice of forum provisions contained in our certificate of incorporation to be inapplicable or unenforceable.

LEGAL MATTERS

The validity of the shares offered by this prospectus has been passed upon by Fenwick & West LLP.

EXPERTS

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

The financial statements of KalVista Pharmaceuticals Limited for the years ended April 30, 2016 incorporated in this prospectus by reference to the Current Report on Form 8-K dated November 21, 2016, have been audited by Deloitte LLP, an independent registered public accounting firm, as stated in their report, which is incorporated herein by reference (which expresses an unqualified opinion on the financial statements and includes an explanatory paragraph referring to KalVista Pharmaceuticals Limited's ability to continue as a going concern). Such financial statements have been so incorporated in reliance upon the report of such firm given upon their authority as experts in accounting and auditing.

WHERE YOU CAN FIND MORE INFORMATION

We file annual, quarterly and current reports, proxy statements and other information with the SEC. Our SEC filings are available to the public at the SEC's website at <http://www.sec.gov>. Copies of certain information filed by us with the SEC are also available on our website at <http://www.kalvista.com>. Our website is not a part of this prospectus and is not incorporated by reference in this prospectus. You may also read and copy any document we file at the SEC's Public Reference Room, 100 F Street, N.E., Washington, D.C. 20549. Please call the SEC at 1-800-SEC-0330 for further information on the operation of the Public Reference Room.

This prospectus is part of a registration statement we filed with the SEC. This prospectus omits some information contained in the registration statement in accordance with SEC rules and regulations. You should review the information and exhibits in the registration statement for further information about us and the securities we are offering. Statements in this prospectus concerning any document we filed as an exhibit to the registration statement or that we otherwise filed with the SEC are not intended to be comprehensive and are qualified by reference to these filings. You should review the complete document to evaluate these statements.

INCORPORATION OF CERTAIN DOCUMENTS BY REFERENCE

The SEC allows us to incorporate by reference into this prospectus much of the information we file with the SEC, which means that we can disclose important information to you by referring you to those publicly available documents. The information that we incorporate by reference in this prospectus is considered to be part of this prospectus. Because we are incorporating by reference future filings with the SEC, this prospectus is continually updated and those future filings may modify or supersede some of the information included or incorporated in this prospectus. This means that you must look at all of the SEC filings that we incorporate by reference to determine if any of the statements in this prospectus or in any document previously incorporated by reference have been modified or superseded. This prospectus incorporates by reference the documents listed below (File No. 001-35443) and any future filings we make with the SEC under Sections 13(a), 13(c), 14 or 15(d) of the Exchange Act (in each case, other than those documents or the portions of those documents not deemed to be filed) between the date of the initial registration statement and the effectiveness of the registration statement and following the effectiveness of the registration statement until the offering of the securities under the registration statement is terminated or completed:

- (1) Our Annual Report on Form 10-K for the year ended December 31, 2015 filed with the Commission on March 30, 2016 pursuant to Section 13 of the Securities Exchange Act of 1934, as amended (the "Exchange Act");

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- (2) All other reports filed pursuant to Section 13(a) or 15(d) of the Exchange Act since the end of the fiscal year covered by our Annual Report referred to in (1) above;
- (3) The description of our common stock in our Registration Statement on Form 8-A (No. 001-36830) filed with the Commission on February 2, 2015, and including any other amendments or reports filed for the purpose of updating such description; and
- (4) All of our filings pursuant to the Exchange Act after the date of the initial registration statement and prior to the effectiveness of the registration statement.

You may request a copy of these documents, which will be provided to you at no cost, by writing or telephoning us using the following contact information below. We will provide copies of the exhibits to these filings only if they are specifically incorporated by reference in these filings.

KalVista Pharmaceuticals, Inc.
One Kendall Square
Bld 200, Ste 2203
Cambridge, MA 02139
Attn: Investor Relations
(857) 999-0075

PART II**INFORMATION NOT REQUIRED IN PROSPECTUS****Item 14. Other Expenses of Issuance and Distribution.**

The following table sets forth the various expenses to be incurred in connection with the sale and distribution of the securities being registered hereby, all of which will be borne by KalVista Pharmaceuticals, Inc. (except any underwriting discounts and commissions and expenses incurred by the selling stockholders for brokerage services or any other expenses incurred by the selling stockholders in disposing of the shares). All amounts shown are estimates except the SEC registration fee.

SEC registration fee	\$ 6,096
Legal fees and expenses	20,000
Accounting fees and expenses	10,000
Miscellaneous expenses	3,904
Total expenses	<u>\$40,000</u>

Item 15. Indemnification of Directors and Officers.

Section 102 of the Delaware General Corporation Law permits a corporation to eliminate the personal liability of its directors or its stockholders for monetary damages for a breach of fiduciary duty as a director, except where the director breached his or her duty of loyalty, failed to act in good faith, engaged in intentional misconduct or knowingly violated a law, authorized the payment of a dividend or approved a stock repurchase in violation of Delaware corporate law or obtained an improper personal benefit. The undersigned registrant's Amended and Restated Certificate of Incorporation provides that no director shall be personally liable to the undersigned registrant or its stockholders for monetary damages for any breach of fiduciary duty as a director, notwithstanding any provision of law imposing such liability, except to the extent that the Delaware General Corporation Law prohibits the elimination or limitation of liability of directors for breaches of fiduciary duty.

Section 145 of the General Corporation Law of the State of Delaware provides that a corporation has the power to indemnify a director, officer, employee, or agent of the corporation and certain other persons serving at the request of the corporation in related capacities against expenses (including attorneys' fees), judgments, fines and amounts paid in settlements actually and reasonably incurred by the person in connection with an action, suit or proceeding to which he or she is or is threatened to be made a party by reason of such position, if such person acted in good faith and in a manner he or she reasonably believed to be in or not opposed to the best interests of the corporation, and, in any criminal action or proceeding, had no reasonable cause to believe his or her conduct was unlawful, except that, in the case of actions brought by or in the right of the corporation, no indemnification shall be made with respect to any claim, issue or matter as to which such person shall have been adjudged to be liable to the corporation unless and only to the extent that the Court of Chancery or other adjudicating court determines that, despite the adjudication of liability but in view of all of the circumstances of the case, such person is fairly and reasonably entitled to indemnity for such expenses which the Court of Chancery or such other court shall deem proper.

The undersigned registrant's Amended and Restated Certificate of Incorporation provides that the undersigned registrant will indemnify each person who was or is a party or threatened to be made a party to any threatened, pending or completed action, suit or proceeding, whether civil, criminal, administrative or investigative (other than an action by or in the right of the undersigned registrant) by reason of the fact that he or she is or was, or has agreed to become, the undersigned registrant's director or officer, or is or was serving, or has agreed to serve, at the undersigned registrant's request as a director, officer, partner, employee or trustee of, or in a similar capacity with, another corporation, partnership, joint venture, trust or other enterprise (all such persons being referred to as an "Indemnitee"), or by reason of any action alleged to have been taken or omitted in such capacity, against all

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expenses (including attorneys' fees), judgments, fines and amounts paid in settlement actually and reasonably incurred in connection with such action, suit or proceeding and any appeal therefrom, if such Indemnitee acted in good faith and in a manner he or she reasonably believed to be in, or not opposed to, the undersigned registrant's best interests, and, with respect to any criminal action or proceeding, he or she had no reasonable cause to believe his or her conduct was unlawful. The undersigned registrant's Amended and Restated Certificate of Incorporation also provides that the undersigned registrant will indemnify any Indemnitee who was or is a party to an action or suit by or in the right of the undersigned registrant to procure a judgment in the undersigned registrant's favor by reason of the fact that the Indemnitee is or was, or has agreed to become, the undersigned registrant's director or officer, or is or was serving, or has agreed to serve, at the undersigned registrant's request as a director, officer, partner, employee or trustee of, or in a similar capacity with, another corporation, partnership, joint venture, trust or other enterprise, or by reason of any action alleged to have been taken or omitted in such capacity, against all expenses (including attorneys' fees) and, to the extent permitted by law, amounts paid in settlement actually and reasonably incurred in connection with such action, suit or proceeding, and any appeal therefrom, if the Indemnitee acted in good faith and in a manner he or she reasonably believed to be in, or not opposed to, the undersigned registrant's best interests, except that no indemnification shall be made with respect to any claim, issue or matter as to which such person shall have been adjudged to be liable to the undersigned registrant, unless a court determines that, despite such adjudication but in view of all of the circumstances, he or she is entitled to indemnification of such expenses.

Notwithstanding the foregoing, to the extent that any Indemnitee has been successful, on the merits or otherwise, he or she will be indemnified by the undersigned registrant against all expenses (including attorneys' fees) actually and reasonably incurred by him or her or on his or her behalf in connection therewith. If the undersigned registrant does not assume the defense, expenses must be advanced to an Indemnitee under certain circumstances.

The undersigned registrant has entered into indemnification agreements with the undersigned registrant's directors and executive officers. In general, these agreements provide that the undersigned registrant will indemnify the director or executive officer to the fullest extent permitted by law for claims arising in his or her capacity as a director or officer of the undersigned registrant's company or in connection with their service at the undersigned registrant's request for another corporation or entity. The undersigned registrant maintains a general liability insurance policy which covers certain liabilities of the undersigned registrant's directors and officers arising out of claims based on acts or omissions in their capacities as directors or officers.

Item 16. Exhibits

The exhibits listed in the Exhibit Index immediately preceding the exhibits are filed as part of this registration statement on Form S-3.

Item 17. Undertakings.

The undersigned registrant hereby undertakes:

- (1) To file, during any period in which offers or sales are being made, a post-effective amendment to this registration statement:
 - (i) To include any prospectus required by Section 10(a)(3) of the Securities Act of 1933;
 - (ii) To reflect in the prospectus any facts or events arising after the effective date of this registration statement (or the most recent post-effective amendment thereof) which, individually or in the aggregate, represent a fundamental change in the information set forth in the registration statement. Notwithstanding the foregoing, any increase or decrease in the volume of securities offered (if the total dollar value of securities offered would not exceed that which was registered) and any deviation from the low or high end of the estimated maximum aggregate offering range may be reflected in the form of

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prospectus filed with the SEC pursuant to Rule 424(b) if, in the aggregate, the changes in volume and price represent no more than 20 percent change in the maximum aggregate offering price set forth in the "Calculation of Registration Fee" table in the effective registration statement; and

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

provided, however, that paragraphs (1)(i), (1)(ii) and (1)(iii) of this section do not apply if the registration statement is on Form S-3 or Form F-3 and the information required to be included in a post-effective amendment by those paragraphs is contained in reports filed with or furnished to the SEC by the registrant pursuant to section 13 or section 15(d) of the Securities Exchange Act of 1934 that are incorporated by reference in the registration statement, or is contained in a form of prospectus filed pursuant to Rule 424(b) that is part of the registration statement.

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

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

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

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

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

(5) That, for the purpose of determining liability of the registrant under the Securities Act of 1933 to any purchaser in the initial distribution of the securities, the undersigned registrant undertakes that in a primary offering of securities of the undersigned registrant pursuant to this registration statement, regardless of the underwriting method used to sell the securities to the purchaser, if the securities are offered or sold to such purchaser by means of any of the following communications, the undersigned registrant will be a seller to the purchaser and will be considered to offer or sell securities to such purchaser:

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

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

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

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

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

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

SIGNATURES

Pursuant to the requirements of the Securities Act of 1933, as amended, the registrant certifies that it has reasonable grounds to believe that it meets all of the requirements for filing on Form S-3 and has duly caused this registration statement to be signed on its behalf by the undersigned, thereunto duly authorized, in the City of Cambridge, State of Massachusetts on December 20, 2016.

KALVISTA PHARMACEUTICALS, INC.

By: /s/ Thomas Andrew Crockett

Thomas Andrew Crockett

Chief Executive Officer

SIGNATURES AND POWER OF ATTORNEY

We, the undersigned officers and directors of KalVista Pharmaceuticals, Inc., hereby severally constitute and appoint Thomas Andrew Crockett and Benjamin L. Palleiko and each of them singly, our true and lawful attorneys with full power to any of them, and to each of them singly, to sign for us and in our names in the capacities indicated below the Registration Statement on Form S-3 filed herewith and any and all pre-effective and post-effective amendments to said registration statement and generally to do all such things in our name and behalf in our capacities as officers and directors to enable KalVista Pharmaceuticals, Inc. to comply with the provisions of the Securities Act of 1933, as amended, and all requirements of the Securities and Exchange Commission, hereby ratifying and confirming our signatures as they may be signed by our said attorneys, or any of them, to said registration statement and any and all amendments thereto.

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

<u>Signature</u>	<u>Title</u>	<u>Date</u>
<u>/s/ Thomas Andrew Crockett</u> Thomas Andrew Crockett	President and Chief Executive Officer, and Director (Principal Executive Officer)	December 20, 2016
<u>/s/ Benjamin L. Palleiko</u> Benjamin L. Palleiko	Chief Financial Officer (Principal Financial Officer and Principal Accounting Officer)	December 20, 2016
<u>/s/ Rajeev Shah</u> Rajeev Shah	Director	December 20, 2016
<u>/s/ Joshua Resnick</u> Joshua Resnick, M.D.	Director	December 20, 2016
<u>/s/ Richard Aldrich</u> Richard Aldrich	Director and Chairman	December 20, 2016
<u>/s/ Edward W. Unkart</u> Edward W. Unkart	Director	December 20, 2016
<u>/s/ Albert Cha</u> Albert Cha, M.D., Ph.D.	Director	December 20, 2016
<u>/s/ Arnold L. Oronsky</u> Arnold L. Oronsky, Ph.D.	Director	December 20, 2016

EXHIBIT INDEX

<u>Exhibit Number</u>	<u>Exhibit Description</u>	<u>Incorporated by Reference</u>				<u>Filed Herewith</u>
		<u>Form</u>	<u>File No.</u>	<u>Exhibit</u>	<u>Filing Date</u>	
4.1	Registrant's Amended and Restated Certificate of Incorporation.	S-1/A	333-201278	3.2	January 23, 2015	
4.2	Certificate of Amendment of Registrant's Amended and Restated Certificate of Incorporation.	8-K	001-36830	3.1	November 23, 2016	
4.3	Certificate of Amendment of Registrant's Amended and Restated Certificate of Incorporation.	8-K	001-36830	3.2	November 23, 2016	
4.4	Registrant's Amended and Restated Bylaws.	S-1/A	333-201278	3.4	January 23, 2015	
4.5	Registration Rights Agreement, dated June 15, 2016 by and among the Registrant and the Sellers.	8-K	001-36830	10.1	November 21, 2016	
5.1	Opinion and Consent of Fenwick & West LLP.					X
23.1	Consent of Deloitte LLP					X
23.2	Consent of PricewaterhouseCoopers LLP					X
23.3	Consent of Fenwick & West LLP (contained in Exhibit 5.1).					X
24	Power of Attorney (incorporated by reference to Page II-4 of this Registration Statement).					X



SILICON VALLEY CENTER 801 CALIFORNIA STREET MOUNTAIN VIEW, CA 94041
TEL 650.988.8500 FAX 650.938.5200 WWW.FENWICK.COM

December 20, 2016

KalVista Pharmaceuticals, Inc.
One Kendall Square
Bld 200, Ste 2203
Cambridge, MA 02139

Ladies and Gentlemen:

At your request, we have examined the Registration Statement on Form S-3 filed by KalVista Pharmaceuticals, Inc. (the "**Company**") with the Securities and Exchange Commission (the "**Commission**") on December 20, 2016 (the "**Registration Statement**"), in connection with the registration under the Securities Act of 1933, as amended (the "**Securities Act**"), of an aggregate of 7,827,258 shares of the Company's common stock, \$0.001 par value per share (the "**Common Stock**"). The Common Stock was issued pursuant to a Share Purchase Agreement (the "**Share Purchase Agreement**"), dated June 15, 2016, by and between the Company, KalVista Pharmaceuticals Ltd. ("**KalVista Limited**"), a private company limited by shares incorporated and registered in England and Wales, the shareholders of KalVista Limited (the "**Selling Stockholders**") and the Seller Representative (as defined therein), as set forth in the Registration Statement and the prospectus contained within the Registration Statement (the "**Prospectus**"). In rendering this opinion, we have examined such matters of fact as we have deemed necessary in order to render the opinion set forth herein, which included examination of the following:

- (1) the Company's Amended and Restated Certificate of Incorporation, as amended, certified by the Delaware Secretary of State on December 14, 2016 (the "**Charter**");
- (2) the Company's Amended and Restated Bylaws, which have been certified to us by the Company in the Opinion Certificate (as defined below) to be currently in effect and unmodified as of the date hereof (the "**Bylaws**");
- (3) the Registration Statement, together with the exhibits filed as a part thereof or incorporated therein by reference;
- (4) the Prospectus prepared in connection with the Registration Statement;
- (5) the Share Purchase Agreement under which the Selling Stockholders acquired the Common Stock to be sold by them as described in the Registration Statement;
- (6) the minutes of a meeting by the Company's Board of Directors (the "**Board**") held on June 14, 2016, at which resolutions were adopted by the Board approving the Share Purchase Agreement and issuance of shares of the Common Stock;
- (7) verification by the Company's transfer agent as to the number of the Company's issued and outstanding shares of capital stock as of December 2, 2016 and verification by the Company in the Opinion Certificate (as defined below) of the issued and outstanding options, warrants and other rights to purchase shares of the Company's capital stock;

(8) the minutes of meetings and actions by written consent of the Company's Board and the Company's stockholders at which, or pursuant to which, the Board and/or the Company's stockholders approved (i) the Charter, (ii) the Bylaws and (iii) the filing of the Registration Statement.

(9) a Certificate of Good Standing issued by the Secretary of State of the State of Delaware dated December 14, 2016, stating that the Company is qualified to do business in good standing under the laws of the State of Delaware and a verbal confirmation that the Company is in good standing with the Secretary of State of the State of Delaware dated December 20, 2016 (together, the "***Certificate of Good Standing***"); and

(10) a Opinion Certificate addressed to us and dated of even date herewith and executed by the Company containing certain factual representations (the "***Opinion Certificate***").

(11) the Definitive Proxy Statement pertaining to the Share Purchase Agreement filed by the Company on October 28, 2016 and the results of the Special Meeting of Stockholders held on November 21, 2016.

In our examination of documents for purposes of this opinion, we have assumed, and express no opinion as to, the genuineness of all signatures on original documents, the authenticity and completeness of all documents submitted to us as originals, the conformity to originals and completeness of all documents submitted to us as copies, the legal capacity of all persons or entities executing the same, the lack of any undisclosed termination, modification, waiver or amendment to any document reviewed by us and the due authorization, execution and delivery of all documents where due authorization, execution and delivery are prerequisites to the effectiveness thereof. We have also assumed that any certificates representing the Common Stock have been, or will be when issued, properly signed by authorized officers of the Company or their agents.

We render this opinion only with respect to, and express no opinion herein concerning the application or effect of the laws of any jurisdiction other than (a) the existing federal laws of the United States of America, (b) the laws of the State of California, as in effect on the date hereof and (c) the Delaware General Corporation Law and reported judicial decisions relating thereto.

In accordance with Section 95 of the American Law Institute's Restatement (Third) of the Law Governing Lawyers (2000), this opinion letter is to be interpreted in accordance with customary practices of lawyers rendering opinions in connection with the filing of a registration statement of the type described herein.

Based upon the foregoing, we are of the opinion that the shares of Common Stock to be sold by the Selling Stockholders pursuant to the Registration Statement and the Prospectus are validly issued, nonassessable and, to our knowledge, fully paid.

* * * * *

We consent to the use of this opinion as an exhibit to the Registration Statement and further consent to all references to us, if any, in the Registration Statement, the Prospectus constituting a part thereof and any amendments thereto. This opinion is intended solely for use in connection with the issuance and sale of the Common Stock subject to the Registration Statement and is not to be relied upon for any other purpose. This opinion is rendered as of the date first written above and based solely on our understanding of facts in existence as of such date after the aforementioned examination. We assume no obligation to advise you of any fact, circumstance, event or change in the law or the facts that may hereafter be brought to our attention whether or not such occurrence would affect or modify the opinions expressed herein.

Very truly yours,

/s/ FENWICK & WEST LLP

CONSENT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

We consent to the incorporation by reference in this Registration Statement on Form S-3 of our report dated August 22, 2016 (November 23, 2016 as to the net loss per share attributable to common shareholders included in note 2 and as to the disclosure of subsequent events included in note 13) relating to the financial statements of KalVista Pharmaceuticals Limited (which expresses an unqualified opinion and includes an explanatory paragraph related to KalVista Pharmaceuticals Limited's ability to continue as a going concern) appearing in the Current Report on Form 8-K of KalVista Pharmaceuticals, Inc. dated November 21, 2016 and to the reference to us under the heading "Experts" in the Prospectus, which is part of this Registration Statement.

/s/ DELOITTE LLP

Reading, United Kingdom
December 20, 2016

CONSENT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

We hereby consent to the incorporation by reference in this Registration Statement on Form S-3 of KalVista Pharmaceuticals, Inc. of our report dated March 30, 2016 relating to the financial statements, which appears in Carbylan Therapeutics, Inc.'s Annual Report on Form 10-K for the year ended December 31, 2015. We also consent to the reference to us under the heading "Experts" in such Registration Statement.

/s/ PricewaterhouseCoopers LLP

San Jose, California

December 20, 2016