

Pharmasset Inc
Form 424B5
May 14, 2010
Table of Contents

Filed Pursuant to Rule 424(b)(5)
Registration No. 333-164744

PROSPECTUS SUPPLEMENT

(To Prospectus Dated February 19, 2010)

3,200,000 Shares

Pharmasset, Inc.

Common Stock

\$29.00 per share

We are offering 3,200,000 shares of our common stock.

We have granted the underwriters an option to purchase up to 480,000 additional shares of our common stock. The underwriters may exercise this option at any time within 30 days after the date of this prospectus supplement.

Our common stock is listed on the Nasdaq Global Market under the symbol VRUS. The last reported sale price of our common stock on the Nasdaq Global Market on May 13, 2010 was \$30.03 per share.

Investing in our common stock involves a high degree of risk. See Risk Factors, beginning on page S-4 of this prospectus supplement to read about factors you should consider before buying shares of our common stock.

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

	<u>Per Share</u>	<u>Total</u>
Public Offering Price	\$ 29.00	\$ 92,800,000
Underwriting Discount	\$ 1.45	\$ 4,640,000
Proceeds, before expenses, to us	\$ 27.55	\$ 88,160,000

You should carefully read this prospectus supplement and the accompanying prospectus, together with the documents we incorporate by reference, before you invest in our common stock.

The underwriters expect to deliver the shares to purchasers on or about May 19, 2010 through the book-entry facilities of The Depository Trust Company.

Citi

J.P.Morgan

Baird

Canaccord Genuity

May 13, 2010

Table of Contents

You should rely only on the information contained in or incorporated by reference in this prospectus supplement and the accompanying prospectus and any free writing prospectus we may authorize to be delivered to you. We have not authorized anyone to provide you with different information. If anyone provides you with different or inconsistent information, you should not rely on it. We are not, and the underwriter is not, making an offer to sell these securities in any jurisdiction where the offer or sale is not permitted. You should not assume that the information contained, or incorporated by reference, in this prospectus supplement or the accompanying prospectus is accurate as of any date other than the date thereof.

TABLE OF CONTENTS

Prospectus Supplement

	<u>Page</u>
<u>About This Prospectus Supplement</u>	S-1
<u>Prospectus Supplement Summary</u>	S-2
<u>The Offering</u>	S-3
<u>Risk Factors</u>	S-4
<u>Forward-Looking Statements</u>	S-5
<u>Use of Proceeds</u>	S-6
<u>Dilution</u>	S-7
<u>Underwriting</u>	S-8
<u>Certain U.S. Federal Income Tax Considerations for Non-U.S. Holders</u>	S-11
<u>Legal Matters</u>	S-13
<u>Experts</u>	S-14

Prospectus

	<u>Page</u>
About This Prospectus	1
Where You Can Find More Information	1
Incorporation of Certain Documents By Reference	2
Forward-Looking Statements	3
Table of Contents	3

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About Pharmasset, Inc.	4
Corporate Information	4
Risk Factors	4
Use of Proceeds	5
Ratio of Earnings to Fixed Charges	5
General Description of Securities We May Offer	5
Description of Capital Stock	6
Description of Debt Securities	11
Description of Warrants	14
Description of Units	15
Plan of Distribution	16
Legal Matters	17
Experts	17

Table of Contents

ABOUT THIS PROSPECTUS SUPPLEMENT

This document is in two parts. The first part is this prospectus supplement, which describes the terms of the offering of common stock and also adds to and updates information contained in the accompanying prospectus and the documents incorporated by reference into this prospectus supplement and the accompanying prospectus. The second part, the accompanying prospectus, provides more general information. Generally, when we refer to this prospectus, we are referring to both parts of this document combined together with all documents incorporated by reference. To the extent there is a conflict between the information contained in this prospectus supplement or any free writing prospectus we may authorize to be delivered to you, on the one hand, and the information contained in the accompanying prospectus or any document incorporated by reference therein, on the other hand, you should rely on the information in this prospectus supplement or such free writing prospectus, as the case may be, provided that, if any statement in one of these documents is inconsistent with a statement in another document having a later date for example, a document incorporated by reference in the accompanying prospectus the statement in the document having the later date modifies or supersedes the earlier statement.

We further note that the representations, warranties and covenants made by us in any agreement that is filed as an exhibit to any document that is incorporated by reference in the accompanying prospectus were made solely for the benefit of the parties to such agreement, including, in some cases, for the purpose of allocating risk among the parties to such agreements, and should not be deemed to be a representation, warranty or covenant to you. Moreover, such representations, warranties or covenants were accurate only as of the date when made. Accordingly, such representations, warranties and covenants should not be relied on as accurately representing the current state of our affairs.

Unless the context otherwise requires, in this prospectus supplement, Pharmasset, the Company, we, us, our and similar names refer to Pharmasset, Inc. Pharmasset and our logo are our trademarks. Other trademarks mentioned in this prospectus supplement are the property of their respective owners.

Table of Contents

PROSPECTUS SUPPLEMENT SUMMARY

This summary highlights selected information about us and this offering. This information is not complete and does not contain all the information you should consider before investing in our common stock. You should carefully read this entire prospectus supplement and the entire accompanying prospectus, including the Risk Factors section beginning on page S-4 of this prospectus supplement and the financial statements and the other information incorporated by reference in this prospectus supplement and the accompanying prospectus, before making an investment decision.

Our Business

We are a clinical-stage pharmaceutical company committed to discovering, developing, and commercializing novel drugs to treat viral infections. Our primary focus is on the development of nucleoside/tide analogs as oral therapeutics for the treatment of chronic hepatitis C virus (HCV) infection and, secondarily, on the development of Racivir for the treatment of human immunodeficiency virus (HIV) infection. Nucleoside/tide analogs are a class of compounds which act as alternative substrates for the viral polymerase, thus inhibiting viral replication. We currently have four clinical-stage product candidates, three of which we are developing ourselves and one of which we are developing with a strategic partner. We are also advancing a series of preclinical candidates in preparation for clinical development. Our four clinical stage product candidates are:

RG7128 (formerly R7128), an HCV cytosine nucleoside analog polymerase inhibitor we are developing through a strategic collaboration with F. Hoffmann-La Roche Ltd and Hoffmann-La Roche Inc. (collectively, Roche). RG7128 is in two Phase 2b clinical trials in combination with Pegasys® (pegylated interferon) plus Copegus® (ribavirin), the standard of care for treating HCV (SOC). RG7128 is also being evaluated in the INFORM studies, the first series of studies designed to investigate the combination of two oral, direct acting antivirals in the absence of pegylated interferon and ribavirin. All of these studies are being conducted by Roche;

PSI-7977 (an isomer of PSI-7851), an HCV uracil nucleotide analog polymerase inhibitor, recently completed 28 days of dosing in a Phase 2a clinical trial in combination with SOC;

PSI-352938 (PSI-938), an HCV guanine nucleotide analog polymerase inhibitor, is in a Phase 1 clinical trial; and

Racivir, for the treatment of HIV in combination with other approved HIV drugs, which has completed a Phase 2 clinical trial.

In addition, we are developing PSI-353661 (PSI-661 , an isomer of PSI-879), an HCV guanine nucleotide analog polymerase inhibitor we nominated as a development candidate in October 2009. PSI-661 is in preclinical studies required for submission of an Investigational New Drug application with the U.S. Food and Drug Administration or equivalent foreign regulatory application. PSI-938 or PSI-661 could potentially be used in combination with our current nucleoside/tides, RG7128 or PSI-7977.

You can obtain more information regarding our business and industry by reading our annual report on Form 10-K for the year ended September 30, 2009 filed with the Securities and Exchange Commission, or SEC, on November 25, 2009, and the other reports we file with the SEC.

Corporate Information

We were incorporated as Pharmasset, Inc. under the laws of Delaware on June 8, 2004. Our corporate headquarters is located at 303-A College Road East, Princeton, New Jersey 08540. Our general telephone number at that address is (609) 613-4100.

S-2

Table of Contents

THE OFFERING

Common stock offered by us pursuant to this prospectus supplement	3,200,000 shares
Common stock to be outstanding after this offering	33,452,182 shares
Overallotment option	480,000 shares
Use of proceeds	We intend to use the net proceeds from this offering for general corporate purposes, which may include, but not be limited to, the funding of clinical trials, the funding of in-licensing agreements for product candidates, additional technologies or other forms of intellectual property and the acquisition of assets or businesses that are complementary to our existing business.
Risk factors	See Risk Factors beginning on page S-4 and in our annual report on Form 10-K for the year ended September 30, 2009 for a discussion of factors you should consider carefully before deciding to invest in our common stock.
NASDAQ Global Market symbol	VRUS

The number of shares of our common stock to be outstanding after this offering is based on 30,252,182 shares of common stock outstanding as of April 30, 2010. Unless specifically stated otherwise, the information in this prospectus supplement excludes:

2,915,392 shares of our common stock issuable upon the exercise of stock options outstanding as of April 30, 2010, at a weighted average exercise price of \$12.44 per share, of which options to purchase 1,762,616 shares of our common stock were then exercisable;

703,975 shares of our common stock reserved for future grants of stock options (or other similar equity instruments) under our 2007 Equity Incentive Plan, as amended, as of April 30, 2010; and

warrants to purchase 127,248 shares of our common stock for \$12.05 per share, all of which are currently exercisable.

Except as otherwise indicated, all information in this prospectus supplement assumes no exercise by the underwriters of their option to purchase additional shares of our common stock.

Table of Contents

RISK FACTORS

Investing in our securities involves risk. Please see the risk factors under the heading "Risk Factors" in our annual report on Form 10-K for the year ended September 30, 2009 as filed with the SEC on November 25, 2009. Before making an investment decision, you should carefully consider these risks as well as other information we include or incorporate by reference in this prospectus supplement and the accompanying prospectus. The risks and uncertainties we have described are not the only ones facing our company. Additional risks and uncertainties not presently known to us or that we currently deem to be immaterial may also affect our business operations.

S-4

Table of Contents

FORWARD-LOOKING STATEMENTS

This prospectus supplement contains 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, or the Exchange Act. Those statements are therefore entitled to the protection of the safe harbor provisions of these laws. These forward-looking statements, which are usually accompanied by words such as may, might, will, should, could, intends, estimates, predicts, potential, continue, believes, anticipates, plans, expect, involve risks and uncertainties, and relate to, without limitation, statements about our product candidates, our market opportunities, our strategy, our competition, our projected revenue and expense levels and the adequacy of our available cash resources. This prospectus supplement, the accompanying prospectus and the documents incorporated by reference herein and therein also contain forward-looking statements attributed to third parties relating to their estimates regarding our industry. These statements are only predictions based on current expectations and projections about future events. There are important factors that could cause our actual results, level of activity, performance or achievements to differ materially from those expressed or forecasted in, or implied by, such forward-looking statements, including those factors to which we refer you in Risk Factors above.

Our business, financial condition, results of operations and prospects may change. Although we believe that the expectations reflected in these forward-looking statements are based upon reasonable assumptions, no assurance can be given that such expectations will be attained or that any deviations will not be material. In light of these risks, uncertainties and assumptions, the forward-looking events and circumstances discussed in this prospectus supplement, the accompanying prospectus and the documents incorporated by reference herein and therein may not occur and actual results could differ materially and adversely from those anticipated or implied in the forward-looking statements. We disclaim any obligation or undertaking to disseminate any updates or revision to any forward-looking statement contained in this prospectus supplement, the accompanying prospectus or the documents incorporated by reference herein and therein to reflect any change in our expectations with regard thereto or any change in events, conditions or circumstances on which any such statement is based.

You should read this prospectus supplement, the accompanying prospectus and the documents that we incorporate by reference herein and therein completely and with the understanding that our actual future results may be materially different from what we expect. You should assume that the information appearing in this prospectus supplement and the accompanying prospectus is accurate as of the date on the front cover of this prospectus supplement and the accompanying prospectus, respectively, only. We qualify all of the information presented in this prospectus supplement and the accompanying prospectus, and particularly our forward-looking statements, by these cautionary statements.

Table of Contents

USE OF PROCEEDS

We estimate that our net proceeds from the sale of our common stock offered pursuant to this prospectus supplement will be approximately \$87.9 million, or approximately \$101.1 million if the underwriters exercise in full their option to purchase 480,000 additional shares of our common stock, based upon the public offering price of \$29.00 and after deducting the underwriting discount and estimated offering expenses that are payable by us. We intend to use the net proceeds from the sale of our common stock pursuant to this offering for general corporate purposes, which may include, but not be limited to:

the funding of clinical trials;

the funding of in-licensing agreements for product candidates, additional technologies or other forms of intellectual property; and

the acquisition of assets or businesses that are complementary to our existing business.

We may also invest the net proceeds temporarily in mutual and money market funds, bank certificates of deposit and investment-grade commercial paper, corporate notes, and government securities until we use them for their stated purpose.

S-6

Table of Contents**DILUTION**

Purchasers of our common stock offered by this prospectus supplement and the accompanying prospectus will experience an immediate dilution in the net tangible book value of their common stock from the public offering price. The net tangible book value of our common stock as of March 31, 2010 was \$35.8 million or \$1.18 per share. Net tangible book value per share of our common stock is equal to our net tangible assets (tangible assets less total liabilities) divided by the number of shares of our common stock issued and outstanding as of March 31, 2010.

Dilution per share represents the difference between the public offering price per share of our common stock and the adjusted net tangible book value per share of our common stock after giving effect to this offering. After reflecting the sale of 3,200,000 shares of our common stock offered by us at the public offering price of \$29.00 per share, less the underwriting discount and estimated offering expenses, our adjusted net tangible book value per share of our common stock as of March 31, 2010 would have been \$123.6 million or \$3.70 per share. The change represents an immediate increase in net tangible book value per share of our common stock of \$2.52 per share to existing stockholders and an immediate dilution of \$25.30 per share to new investors purchasing the shares of our common stock in this offering. The following table illustrates this per share dilution:

Public offering price per share	\$ 29.00
Net tangible book value per share as of March 31, 2010	\$ 1.18
Increase per share attributable to new investors	2.52
	<hr/>
Adjusted net tangible book value per share as of March 31, 2010	3.70
	<hr/>
Dilution per share to new investors	\$ 25.30
	<hr/>

If the underwriters exercise in full their option to purchase 480,000 additional shares of our common stock at the public offering price of \$29.00 per share, the adjusted net tangible book value after this offering would be \$4.03 per share, representing an increase in net tangible book value of \$2.85 per share to existing stockholders and immediate dilution in net tangible book value of \$24.97 per share to new investors purchasing our common stock in this offering at the public offering price.

Table of Contents**UNDERWRITING**

Citigroup Global Markets Inc. (Citi) is acting as sole book-running manager of this offering and as representative of the underwriters named below. Subject to the terms and conditions stated in the underwriting agreement dated the date of this prospectus supplement, each underwriter named below has severally agreed to purchase, and we have agreed to sell to that underwriter, the number of shares set forth opposite the underwriter s name.

Underwriter	Number of Shares
Citigroup Global Markets Inc.	2,080,000
J.P. Morgan Securities Inc.	480,000
Robert W. Baird & Co. Incorporated	320,000
Canaccord Genuity Inc.	320,000
Total	3,200,000

The underwriting agreement provides that the obligations of the underwriters to purchase the shares included in this offering are subject to approval of legal matters by counsel and to other conditions. The underwriters are obligated to purchase all the shares (other than those covered by the over-allotment option described below) if they purchase any of the shares.

Shares sold by the underwriters to the public will initially be offered at the initial public offering price set forth on the cover of this prospectus supplement. Any shares sold by the underwriters to securities dealers may be sold at a discount from the initial public offering price not to exceed \$0.87 per share. If all the shares are not sold at the initial offering price, the underwriters may change the offering price and the other selling terms.

If the underwriters sell more shares than the total number set forth in the table above, we have granted to the underwriters an option, exercisable for 30 days from the date of this prospectus supplement, to purchase up to 480,000 additional shares at the public offering price less the underwriting discount. The underwriters may exercise the option solely for the purpose of covering over-allotments, if any, in connection with this offering. To the extent the option is exercised, each underwriter must purchase a number of additional shares approximately proportionate to that underwriter s initial purchase commitment. Any shares issued or sold under the option will be issued and sold on the same terms and conditions as the other shares that are the subject of this offering.

We, our directors, certain of our officers and funds affiliated with our chairman of the board have agreed that, without the prior written consent of Citi, we and they will not, during the period ending 60 days after the date of this prospectus supplement:

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 shares of our common stock or any securities convertible into or exercisable or exchangeable for our common stock; or

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enter into any swap or other arrangement that transfers to another, in whole or in part, any of the economic consequences of ownership of our common stock;

whether any such transaction described above is to be settled by delivery of our common stock or such other securities, in cash or otherwise.

In addition, during such 60-day restricted period, we will not file any registration statement with the SEC relating to the offering of any shares of our common stock or any securities convertible into or exchangeable for our common stock.

The restrictions described above do not apply to:

with respect to us:

the shares of our common stock to be sold in this offering;

S-8

Table of Contents

the issuance by us of shares of our common stock or options to purchase shares of our common stock, or common stock upon exercise of options, pursuant to our 1998 Stock Plan or our 2007 Equity Incentive Plan, as amended; or

the issuance by us of shares of our common stock upon the exercise of warrants to purchase our common stock that are currently outstanding (as described above under the heading "The Offering" on page S-3); or

with respect to our directors, certain of our officers and funds affiliated with our chairman of the board:

transactions relating to shares of our common stock or other securities acquired in open market transactions after the completion of this offering, provided that no filing under Section 16(a) of the Exchange Act shall be required or shall be voluntarily made in connection with subsequent sales of our common stock or other securities acquired in such open market transactions;

transfers of shares of our common stock or any security convertible into our common stock as a bona fide gift; or

transfers of shares of our common stock or any security convertible into our common stock either during the respective director's or officer's lifetime or upon death by will or intestate succession to the immediate family of the director or officer or to a trust the beneficiaries of which are exclusively the respective director's or officer's and/or a member or members of his or her immediate family,

provided that in the case of any transfer or distribution described in the two preceding bullets (i) each donee or distributee agrees in writing to the same restrictions as set forth above and (ii) no filing under Section 16(a) of the Exchange Act, reporting a reduction in beneficial ownership of shares of our common stock, shall be required or shall be voluntarily made during the 60-day restricted period.

The shares are listed on the Nasdaq Global Market under the symbol "VRUS". The transfer agent for our common stock to be issued in this offering is Computershare Trust Company, N.A. located at 250 Royall Street, Canton, MA 02021.

The following table shows the underwriting discount that we are to pay to the underwriters in connection with this offering. This amount is shown assuming both no exercise and full exercise of the underwriters' over-allotment option.

	Paid by Pharmasset	
	No Exercise	Full Exercise
Per share	\$ 1.45	\$ 1.45
Total	\$ 4,640,000	\$ 5,336,000

We estimate that our portion of the total expenses of this offering, not including the underwriting discount, will be \$300,000.

In connection with the offering, the underwriters may purchase and sell shares in the open market. Purchases and sales in the open market may include short sales, purchases to cover short positions, which may include purchases pursuant to the over-allotment option, and stabilizing

purchases.

Short sales involve secondary market sales by the underwriters of a greater number of shares than they are required to purchase in this offering.

Covered short sales are sales of shares in an amount up to the number of shares represented by the underwriters over-allotment option.

Naked short sales are sales of shares in an amount in excess of the number of shares represented by the underwriters over-allotment option.

S-9

Table of Contents

Covering transactions involve purchases of shares either pursuant to the over-allotment option or in the open market after the distribution has been completed in order to cover short positions.

To close a naked short position, the underwriters must purchase shares in the open market after the distribution has been completed. A naked short position is more likely to be created if the underwriters are concerned that there may be downward pressure on the price of the shares in the open market after pricing that could adversely affect investors who purchase in this offering.

To close a covered short position, the underwriters must purchase shares in the open market after the distribution has been completed or must exercise the over-allotment option. In determining the source of shares to close the covered short position, the underwriters will consider, among other things, the price of shares available for purchase in the open market as compared to the price at which they may purchase shares through the over-allotment option.

Stabilizing transactions involve bids to purchase shares so long as the stabilizing bids do not exceed a specified maximum.

Purchases to cover short positions and stabilizing purchases, as well as other purchases by the underwriters for their own accounts, may have the effect of preventing or retarding a decline in the market price of the shares. They may also cause the price of the shares to be higher than the price that would otherwise exist in the open market in the absence of these transactions. The underwriters may conduct these transactions on the Nasdaq Global Market, in the over-the-counter market or otherwise. If the underwriters commence any of these transactions, they may discontinue them at any time.

The underwriters may, from time to time, engage in transactions with and perform services for us in the ordinary course of their business for which they may receive customary fees and reimbursement of expenses.

We have agreed to indemnify the underwriters against certain liabilities, including liabilities under the Securities Act, or to contribute to payments the underwriters may be required to make because of any of those liabilities.

Table of Contents

CERTAIN U.S. FEDERAL INCOME TAX CONSIDERATIONS FOR NON-U.S. HOLDERS

The following discussion is a general summary of the material U.S. federal income and estate tax consequences of the ownership and disposition of our common stock applicable to Non-U.S. Holders. As used herein, a Non-U.S. Holder means a beneficial owner of our common stock that is *not* a U.S. person for U.S. federal income tax purposes, and that will hold shares of our common stock as capital assets (*i.e.*, generally, for investment). For U.S. federal income tax purposes, a U.S. person includes:

an individual who is a citizen or resident of the United States;

a corporation (or other business entity treated as a corporation) created or organized in the United States or under the laws of the United States, any state thereof or the District of Columbia;

an estate the income of which is includible in gross income regardless of source; or

a trust that (A) is subject to the primary supervision of a court within the United States and the control of one or more U.S. persons, or (B) otherwise has validly elected to be treated as a U.S. domestic trust.

If a partnership holds shares of our common stock, the U.S. federal income tax treatment of a partner in the partnership will generally depend on the status of the partner and the activities of the partnership. This discussion does not address the tax treatment of partnerships or persons who hold their common stock through partnerships or other pass-through entities for U.S. federal income tax purposes. A partner in a partnership or other pass-through entity that will hold our common stock should consult her, her or its own tax advisor regarding the tax consequences of the acquisition, holding and disposing of our common stock through a partnership or other pass-through entity, as applicable.

This summary does not consider specific facts and circumstances that may be relevant to a particular Non-U.S. Holder's tax position and does not consider U.S. state and local or non-U.S. tax consequences. It also does not consider Non-U.S. Holders subject to special tax treatment under the U.S. federal income tax laws (including banks and insurance companies, dealers in securities, holders of our common stock held as part of a straddle, hedge, conversion transaction or other risk-reduction transaction, controlled foreign corporations, passive foreign investment companies, companies that accumulate earnings to avoid U.S. federal income tax, foreign tax-exempt organizations, former U.S. citizens or residents and persons who hold or receive common stock as compensation or pursuant to the exercise of compensatory options). This summary is based on provisions of the U.S. Internal Revenue Code of 1986, as amended, or the Code, applicable Treasury regulations, administrative pronouncements of the U.S. Internal Revenue Service, or the IRS, and judicial decisions, all as in effect on the date hereof, and all of which are subject to change, possibly on a retroactive basis, and different interpretations.

This summary is included herein as general information only. Accordingly, each prospective Non-U.S. Holder is urged to consult its tax advisor with respect to the U.S. federal, state, local and non-U.S. income, estate and other tax consequences of holding and disposing of our common stock.

U.S. Trade or Business Income

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For purposes of this discussion, dividend income and gain on the sale or other taxable disposition of our common stock will be considered to be U.S. trade or business income if such income or gain is (i) effectively connected with the conduct by a Non-U.S. Holder of a trade or business within the United States and (ii) in the case of a Non-U.S. Holder that is eligible for the benefits of an income tax treaty with the United States, attributable to a permanent establishment (or, for an individual, a fixed base) maintained by the Non-U.S. Holder in the United States. Generally, U.S. trade or business income is not subject to U.S. federal withholding tax (provided the Non-U.S. Holder complies with applicable certification and disclosure requirements); instead, a Non-U.S. Holder is subject to U.S. federal income tax on U.S. trade or business income on a net income basis at regular U.S. federal income tax rates in the same manner as a U.S. person. Any U.S. trade or business income

S-11

Table of Contents

received by a Non-U.S. Holder that is a corporation also may be subject to a branch profits tax at a 30% rate, or at a lower rate prescribed by an applicable income tax treaty, under specific circumstances.

Distributions

Distributions of cash or property that we pay will constitute dividends for U.S. federal income tax purposes to the extent paid from our current or accumulated earnings and profits (as determined under U.S. federal income tax principles). A Non-U.S. Holder generally will be subject to U.S. federal withholding tax at a 30% rate, or at a reduced rate prescribed by an applicable income tax treaty, on any dividends received in respect of our common stock. If the amount of a distribution exceeds our current and accumulated earnings and profits, such excess first will be treated as a tax-free return of capital to the extent of the Non-U.S. Holder's tax basis in our common stock, and thereafter will be treated as capital gain. In order to obtain a reduced rate of U.S. federal withholding tax under an applicable income tax treaty, a Non-U.S. Holder will be required to provide a properly executed IRS Form W-8BEN certifying its entitlement to benefits under the treaty. A Non-U.S. Holder of our common stock that is eligible for a reduced rate of U.S. federal withholding tax under an income tax treaty may obtain a refund or credit of any excess amounts withheld by filing an appropriate claim for a refund with the IRS. A Non-U.S. Holder should consult its own tax advisor regarding its possible entitlement to benefits under an income tax treaty.

The U.S. federal withholding tax does not apply to dividends that are U.S. trade or business income, as defined above, of a Non-U.S. Holder who provides a properly executed IRS Form W-8ECI, certifying that the dividends are effectively connected with the Non-U.S. Holder's conduct of a trade or business within the United States.

Dispositions of Our Common Stock

A Non-U.S. Holder generally will not be subject to U.S. federal income or withholding tax in respect of any gain on a sale or other disposition of our common stock unless:

the gain is U.S. trade or business income, as defined above;

the Non-U.S. Holder is an individual who is present in the United States for 183 or more days in the taxable year of the disposition and meets other conditions; or

we are or have been a United States real property holding corporation, or a USRPHC, under section 897 of the Code at any time during the shorter of the five-year period ending on the date of disposition and the Non-U.S. Holder's holding period for our common stock.

In general, a corporation is a USRPHC if the fair market value of its United States real property interests, as defined in the Code and applicable Treasury regulations, equals or exceeds 50% of the sum of the fair market value of its worldwide real property interests and its other assets used or held for use in a trade or business. If we are determined to be a USRPHC, the U.S. federal income and withholding taxes relating to interests in USRPHCs nevertheless will not apply to gains derived from the sale or other disposition of the common stock by a Non-U.S. Holder whose shareholdings, actual and constructive, at all times during the applicable period, amount to 5% or less of our common stock, provided that our common stock is regularly traded on an established securities market. We do not believe that we currently are a USRPHC, and we do not anticipate becoming a USRPHC in the future. However, no assurance can be given that we will not be a USRPHC, or that our common stock

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will be considered regularly traded, when a Non-U.S. Holder sells its shares of our common stock.

U.S. Federal Estate Taxes

Shares of our common stock owned or treated as owned by an individual who is a Non-U.S. Holder at the time of death will be included in the individual's gross estate for U.S. federal estate tax purposes, and may be subject to U.S. federal estate tax, unless an applicable estate tax treaty provides otherwise.

S-12

Table of Contents

Information Reporting and Backup Withholding Requirements

We must annually report to the IRS and to each Non-U.S. Holder any dividend income that is subject to U.S. federal withholding tax, or that is exempt from such withholding tax pursuant to an income tax treaty. Copies of these information returns also may be made available under the provisions of a specific treaty or agreement to the tax authorities of the country in which the Non-U.S. Holder resides. Under certain circumstances, the Code imposes a backup withholding obligation (currently at a rate of 28%) on certain reportable payments. Dividends paid to a Non-U.S. Holder of our common stock generally will be exempt from backup withholding if the Non-U.S. Holder provides a properly executed applicable IRS Form W-8 or otherwise establishes an exemption.

The payment of the proceeds from the disposition of common stock to or through the U.S. office of any broker, U.S. or foreign, will be subject to information reporting and possible backup withholding unless the holder certifies as to its non-U.S. status under penalties of perjury or otherwise establishes an exemption, provided that the broker does not have actual knowledge or reason to know that the holder is a U.S. person or that the conditions of any other exemption are not, in fact, satisfied. The payment of the proceeds from the disposition of common stock to or through a non-U.S. office of a non-U.S. broker will not be subject to information reporting or backup withholding unless the non-U.S. broker has certain types of relationships with the United States (a U.S. related person). In the case of the payment of the proceeds from the disposition of our common stock to or through a non-U.S. office of a broker that is either a U.S. person or a U.S. related person, the Treasury regulations require information reporting (but not the backup withholding) on the payment unless the broker has documentary evidence in its files that the holder is a Non-U.S. Holder and the broker has no knowledge to the contrary. Non-U.S. Holders should consult their own tax advisors on the application of information reporting and backup withholding to them in their particular circumstances (including upon their disposition of our common stock).

Backup withholding is not an additional tax. Any amounts withheld under the backup withholding rules from a payment to a Non-U.S. Holder will be refunded or credited against the Non-U.S. Holder's U.S. federal income tax liability, if any, if the Non-U.S. Holder provides the required information to the IRS.

New Legislation Relating to Foreign Accounts

Newly enacted legislation may impose withholding taxes on certain types of payments made to foreign financial institutions and non-financial foreign entities (each as defined under these rules). The legislation imposes a 30% withholding tax on dividends on, or gross proceeds from the sale or other disposition of, our common stock paid to a foreign financial institution or to a non-financial foreign entity, unless (i) the foreign financial institution undertakes certain diligence and reporting obligations with respect to certain U.S. account holders or (ii) the non-financial foreign entity either certifies it does not have any substantial U.S. owners or furnishes identifying information regarding each substantial U.S. owner. If the payee is a foreign financial institution, it must enter into an agreement with the United States Treasury requiring, among other things, that it undertake to identify accounts held by certain U.S. persons or U.S.-owned foreign entities, annually report certain information about such accounts, and withhold 30% on payments to account holders whose actions prevent it from complying with these reporting and other requirements. The legislation would apply to payments made after December 31, 2012. Prospective investors should consult their tax advisors regarding the possible implications of this legislation on their investment in our common stock.

LEGAL MATTERS

The validity of the shares of common stock we are offering will be passed upon by Pepper Hamilton LLP, Philadelphia, Pennsylvania. Wilmer Cutler Pickering Hale and Dorr LLP, Boston, Massachusetts, is counsel for the underwriters.

Table of Contents

EXPERTS

The financial statements of Pharmasset, Inc. as of September 30, 2009 and 2008 and for each of the three years in the period ended September 30, 2009 and management's assessment of the effectiveness of internal control over financial reporting as of September 30, 2009 of Pharmasset, Inc. appearing in its Annual Report on Form 10-K and incorporated herein by reference have been so incorporated by reference in reliance upon the reports of Grant Thornton LLP, independent registered public accountants, upon the authority of such firm as experts in accounting and auditing in giving said reports.

S-14

Table of Contents

PROSPECTUS

Pharmasset, Inc.

\$150,000,000

COMMON STOCK

PREFERRED STOCK

DEBT SECURITIES

WARRANTS

UNITS

This prospectus relates to common stock, preferred stock, debt securities, warrants and units that we may sell from time to time in one or more offerings up to a total public offering price of up to an aggregate of \$150,000,000 (or its equivalent in foreign or composite currencies) on terms to be determined at the time of sale. We will provide specific terms of these securities in supplements to this prospectus. You should read this prospectus and any supplement carefully before you invest. This prospectus may not be used to offer and sell securities unless accompanied by a prospectus supplement for those securities.

Our common stock is listed on The NASDAQ Stock Market LLC under the symbol VRUS. Each prospectus supplement to this prospectus will contain information, where applicable, as to any other listing on The NASDAQ Stock Market LLC or any other national securities exchange of the securities covered by such prospectus supplement.

These securities may be sold directly by us, through dealers or agents designated from time to time, to or through underwriters or through a combination of these methods. See "Plan of Distribution" in this prospectus. We may also describe the plan of distribution for any particular offering of these securities in any applicable prospectus supplement. If any agents, underwriters or dealers are involved in the sale of any securities in respect of which this prospectus is being delivered, we will disclose their names and the nature of our arrangements with them in a prospectus supplement. The net proceeds we expect to receive from any such sale will also be included in a prospectus supplement.

Investing in our securities involves risks. See Risk Factors on page 4 of this prospectus. We may include specific risk factors in an applicable prospectus supplement under the heading Risk Factors. You should review that section of the prospectus supplement for a discussion of matters that investors in our securities should consider.

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

The date of this prospectus is February 19, 2010

Table of Contents

TABLE OF CONTENTS

	Page
<u>About This Prospectus</u>	1
<u>Where You Can Find More Information</u>	1
<u>Incorporation of Certain Documents By Reference</u>	2
<u>Forward-Looking Statements</u>	3
<u>About Pharmasset, Inc.</u>	4
<u>Corporate Information</u>	4
<u>Risk Factors</u>	4
<u>Use of Proceeds</u>	5
<u>Ratio of Earnings to Fixed Charges</u>	5
<u>General Description of Securities We May Offer</u>	5
<u>Description of Capital Stock</u>	6
<u>Description of Debt Securities</u>	11
<u>Description of Warrants</u>	14
<u>Description of Units</u>	15
<u>Plan of Distribution</u>	16
<u>Legal Matters</u>	17
<u>Experts</u>	17

Table of Contents

ABOUT THIS PROSPECTUS

This prospectus is part of a registration statement on Form S-3, or Registration Statement, that we filed with the Securities and Exchange Commission, or SEC, using a shelf registration process. Under this shelf process, we may sell any combination of the securities described in this prospectus in one or more offerings up to an aggregate public offering price of \$150,000,000 (or its equivalent in foreign or composite currencies). This prospectus provides you with a general description of the securities that we may offer. Each time we use this prospectus to sell securities, we will provide a prospectus supplement that will contain specific information about the securities being offered and the terms of that offering. The prospectus supplement may also add, update or change information contained in this prospectus. You should read both this prospectus and any prospectus supplement and the documents incorporated by reference into this prospectus, together with the additional information described below under Where You Can Find More Information, carefully before making an investment decision.

Any statement made in this prospectus or in a document incorporated or deemed to be incorporated by reference in this prospectus will be deemed to be modified or superseded for purposes of this prospectus to the extent that a statement contained in any prospectus supplement or in any other subsequently filed document that is also incorporated or deemed to be incorporated by reference in this prospectus modifies or supersedes that statement. Any statement so modified or superseded will not be deemed, except as so modified or superseded, to constitute a part of this prospectus. See Incorporation of Certain Documents by Reference in this prospectus.

Unless the context otherwise requires, in this prospectus, Pharmasset, the Company, we, us, our and similar names refer to Pharmasset, Inc.

Pharmasset and our logo are our trademarks. Other trademarks mentioned in this prospectus are the property of their respective owners.

WHERE YOU CAN FIND MORE INFORMATION

We are subject to the reporting requirements of the Securities Exchange Act of 1934, as amended, or the Exchange Act, and we file annual, quarterly and current reports, proxy statements and other information with the SEC. You may read and copy the reports, proxy statements and other information that we file at the SEC's Public Reference Room at 100 F Street NE, Washington, D.C. 20549 at prescribed rates. Information on the operation of the Public Reference Room may be obtained by calling the SEC at 1-800-SEC-0330. Our filings are also available free of charge at the SEC's website at <http://www.sec.gov> and through The NASDAQ Stock Market LLC, or NASDAQ, on which our common stock is listed. Information about obtaining copies of our public filings with NASDAQ is available at their website at <http://www.nasdaq.com>.

This prospectus is part of the Registration Statement that we filed with the SEC under the Securities Act of 1933, as amended, or the Securities Act. This prospectus does not contain all of the information set forth in the Registration Statement. For more information about us and our securities, you should read the Registration Statement and its exhibits and schedules. Copies of the Registration Statement, including its exhibits, may be inspected without charge at the offices of the SEC or obtained at prescribed rates from the Public Reference Room of the SEC at 100 F Street NE, Washington, D.C. 20549. Copies of the Registration Statement may be obtained without charge at the SEC's website.

Table of Contents

INCORPORATION OF CERTAIN DOCUMENTS BY REFERENCE

The SEC allows us to incorporate by reference the information we file with the SEC, which means that we can disclose important information to you by referring you to those documents. The information incorporated by reference is considered to be part of this prospectus, and information that we file with the SEC after the date of this prospectus will automatically update and may supersede this information. We are incorporating by reference into this prospectus the documents listed below:

the description of our common stock contained in our Form 8-A filed on April 24, 2007, including any amendments or reports filed for the purpose of updating the description;

our annual report on Form 10-K for the fiscal year ended September 30, 2009 filed with the SEC on November 25, 2009;

our current reports on Form 8-K filed with the SEC on January 8, 2010, January 25, 2010 and January 28, 2010;

all documents that we file with the SEC under Section 13(a), 13(c), 14 or 15(d) of the Exchange Act after the date of the initial filing of the Registration Statement and prior to the effectiveness of the Registration Statement; and

all documents that we file with the SEC under Section 13(a), 13(c), 14 or 15(d) of the Exchange Act after the date of this prospectus and before the termination of the final offering of securities under this prospectus.

We do not incorporate by reference any information furnished pursuant to Items 2.02 or 7.01 of Form 8-K in any future filings, unless specifically stated otherwise in such filings. Any statement contained in a document incorporated by reference in this prospectus shall be modified or superseded for purposes of this prospectus to the extent that a statement contained in this prospectus, any prospectus supplement or in any other subsequently filed document which is incorporated by reference modifies or supersedes such statement.

You can obtain copies of any of the documents incorporated by reference in this prospectus from us or, as described above, through the SEC or the SEC's web site at <http://www.sec.gov>. Documents incorporated by reference are available from us, without charge, excluding all exhibits unless specifically incorporated by reference in the documents. You may obtain documents incorporated by reference in this prospectus by writing to us at the following address or by calling us at the telephone number listed below:

Pharmasset, Inc.

303-A College Road East

Princeton, New Jersey 08540

Attention: Investor Relations

Telephone: (609) 613-4100

We also maintain a web site at <http://www.pharmasset.com> (which is not intended to be an active hyperlink in this prospectus) through which you can obtain copies of documents that we have filed with the SEC. The contents of that site are not incorporated by reference in or otherwise a part of this prospectus.

Table of Contents

FORWARD-LOOKING STATEMENTS

This prospectus and any prospectus supplement contain forward-looking statements within the meaning of Section 27A of the Securities Act and Section 21E of the Exchange Act. Those statements are therefore entitled to the protection of the safe harbor provisions of these laws. These forward-looking statements, which are usually accompanied by words such as may, might, will, should, could, intends, estimates, potential, continue, believes, anticipates, plans, expects and similar expressions, involve risks and uncertainties, and relate to, without limitation, statements about our research and development plans and programs, market opportunities, our strategy, our competition, our projected revenue and expense levels and the adequacy of our available cash resources. This prospectus and any prospectus supplement also contain forward-looking statements attributed to third parties relating to their estimates regarding our industry. These statements are only predictions based on current expectations and projections about future events. There are important factors that could cause our actual results, level of activity, performance or achievements to differ materially from those expressed or forecasted in, or implied by, such forward-looking statements, including those factors discussed in Risk Factors below.

Although we believe that the expectations reflected in these forward-looking statements are based upon reasonable assumptions, no assurance can be given that such expectations will be attained or that any deviations will not be material. In light of these risks, uncertainties and assumptions, the forward-looking events and circumstances discussed in this prospectus and any prospectus supplement may not occur and actual results could differ materially and adversely from those anticipated or implied in the forward-looking statements. We disclaim any obligation or undertaking to disseminate any updates or revision to any forward-looking statement contained herein to reflect any change in our expectations with regard thereto or any change in events, conditions or circumstances on which any such statement is based.

You should read this prospectus and any prospectus supplement and the documents that we reference herein and therein, as well as the exhibits filed with or incorporated by reference into the Registration Statement, completely and with the understanding that our actual future results may be materially different from what we expect. You should assume that the information appearing in this prospectus and any prospectus supplement is accurate as of the date on the front cover of this prospectus or such prospectus supplement only. Our business, financial condition, results of operations and prospects may change. We may not update these forward-looking statements, even though our situation may change in the future, unless we have obligations under the federal securities laws to update and disclose material developments related to previously disclosed information. We qualify all of the information presented in this prospectus and any prospectus supplement, and particularly our forward-looking statements, by these cautionary statements.

Table of Contents

ABOUT PHARMASSET, INC.

We are a clinical-stage pharmaceutical company committed to discovering, developing and commercializing novel drugs to treat viral infections. Our primary focus is on the development of nucleoside/tide analogs as oral therapeutics for the treatment of chronic hepatitis C virus, or HCV, infection and, secondarily, on the development of Racivir™ for the treatment of human immunodeficiency virus, or HIV, infection. Nucleoside/tide analogs are a class of compounds which act as alternative substrates for the viral polymerase, thus inhibiting viral replication. We currently have three clinical-stage product candidates, two of which we are developing ourselves and one of which we are developing with a strategic partner. We are also advancing a series of preclinical candidates in preparation for clinical development. Our three clinical stage product candidates are:

RG7128 (formerly R7128), a first generation HCV nucleoside polymerase inhibitor we are developing through a strategic collaboration with F. Hoffmann-La Roche Ltd and Hoffmann-La Roche Inc. (collectively Roche). RG7128 is in a Phase 2b clinical trial in combination with Pegasys® (pegylated interferon) plus Copegus® (ribavirin), the standard of care for treating HCV. In addition, RG7128 recently completed INFORM-1, a study designed to investigate the combination of two oral direct acting antivirals in the absence of pegylated interferon and ribavirin. Both of these studies are being conducted by Roche;

PSI-7977 (an isomer of PSI-7851), a second generation HCV nucleotide polymerase inhibitor that is in a Phase 2a clinical trial; and

Racivir, for the treatment of HIV in combination with other approved HIV drugs, which has completed a Phase 2 clinical trial. In addition, we nominated PSI-938 and PSI-879 as third generation nucleotide development candidates for the treatment of HCV, each of which could potentially be used in combination with our current nucleoside/tides, RG7128 or PSI-7977. PSI-938 and PSI-879 are proprietary purine nucleotide analog inhibitors of HCV polymerase that are in preclinical studies required for submission of an Investigational New Drug application with the U.S. Food and Drug Administration or equivalent foreign regulatory application.

You can get more information regarding our business and industry by reading our most recent annual report on Form 10-K and the other reports we file with the SEC. See [Where You Can Find More Information](#) and [Incorporation of Certain Documents by Reference](#).

CORPORATE INFORMATION

We were incorporated as Pharmasset, Inc. under the laws of Delaware on June 8, 2004. Our corporate headquarters is located at 303-A College Road East, Princeton, New Jersey 08540. Our general telephone number at that address is (609) 613-4100.

RISK FACTORS

Investing in our securities involves risk. Please see the risk factors under the heading [Risk Factors](#) in our most recent annual report on Form 10-K which is on file with the SEC and is incorporated herein by reference. Before making an investment decision, you should carefully consider these risks as well as other information we include or incorporate by reference in this prospectus and any prospectus supplement. The risks and uncertainties we have described are not the only ones facing our company. Additional risks and uncertainties not presently known to us or that we currently deem to be immaterial may also affect our business operations.

Table of Contents

USE OF PROCEEDS

Unless we indicate otherwise in the prospectus supplement for a particular offering, we intend to use the net proceeds of the securities offered by this prospectus for general corporate purposes, which may include, but not be limited to, the acquisition of assets or businesses that are complementary to our existing business, the repayment of our debt and the funding of in-licensing agreements for product candidates, additional technologies or other forms of intellectual property. We will set forth in the prospectus supplement for a particular offering our intended use for the net proceeds received from the sale of securities in such offering. We may also invest the net proceeds temporarily in mutual and money market funds, bank certificates of deposit and investment-grade commercial paper, corporate notes, and government securities until we use them for their stated purpose.

RATIO OF EARNINGS TO FIXED CHARGES

Our ratio of earnings to fixed charges for each of the five most recently completed fiscal years and any required interim periods will each be specified in a prospectus supplement or in a document that we file with the SEC and incorporate by reference pertaining to the issuance, if any, by us of debt securities in the future.

GENERAL DESCRIPTION OF SECURITIES WE MAY OFFER

We may offer shares of our common stock and preferred stock, various series of debt securities, warrants or units to purchase any of such securities, with a total value of up to \$150,000,000, from time to time in one or more offerings under this prospectus at prices and on terms to be determined by market conditions at the time of the offering. This prospectus provides you with a general description of the securities that we may offer. In connection with each offering, we will provide a prospectus supplement that will describe the specific amounts, prices and terms of the securities being offered, including, to the extent applicable:

designation or classification;

aggregate offering price;

rates and times of payment of dividends;

redemption, conversion or exchange terms;

conversion or exchange prices or rates and any provisions for changes to or adjustments in the conversion or exchange prices or rates and in the securities or other property receivable upon conversion or exchange;

ranking;

restrictive covenants;

voting or other rights; and

important federal income tax considerations.

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The prospectus supplement also may add, update or change information contained in this prospectus or in documents we have incorporated by reference. However, no prospectus supplement will offer a security that is not included in the Registration Statement at the time of its effectiveness or offer a security of a type that is not described in this prospectus.

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

Table of Contents

DESCRIPTION OF CAPITAL STOCK

Our certificate of incorporation authorizes the issuance of up to 100,000,000 shares of common stock, par value \$0.001 per share and 10,000,000 shares of undesignated preferred stock, par value \$0.001 per share, the rights and preferences of which may be established from time to time by our board of directors. As of February 2, 2010, we had outstanding 30,156,473 shares of common stock and zero shares of preferred stock.

The following is qualified in its entirety by reference to our certificate of incorporation and our bylaws, and by the provisions of applicable law. Our certificate of incorporation and bylaws are included as exhibits to our most recent annual report on Form 10-K.

Common Stock

Holders of our common stock are entitled to one vote for each share for the election of directors and on all other matters submitted to a vote of stockholders, and do not have cumulative voting rights. Generally, in matters other than the election of directors, the affirmative vote of a majority of the shares present in person or represented by proxy and entitled to vote on the matter shall be the action of the stockholders. For the election of directors, directors are elected by a plurality of the votes of the shares present in person or represented by proxy and entitled to vote. Holders of our common stock are entitled to receive, as, when and if declared by our board of directors from time to time, such dividends and other distributions in cash, stock or property from our assets or funds legally available for such purposes, subject to any preferential dividend or other rights of any then outstanding preferred stock.

No preemptive, conversion, subscription or liquidation rights or sinking fund provisions apply to our common stock. All outstanding shares of our common stock are fully paid and non-assessable. In the event of our liquidation, dissolution or winding up, holders of our common stock are entitled to share ratably in the assets available for distribution, subject to any preferential or other rights of any then outstanding preferred stock.

Preferred Stock

Our board of directors has the authority, without action by our stockholders, to designate and issue preferred stock in one or more classes or one or more series of stock within any class and to designate the rights, preferences and privileges of each class or series, which may be greater than the rights of our common stock. It is not possible to state the actual effect of the issuance of any shares of preferred stock upon the rights of holders of our common stock until our board of directors determines the specific rights of the holders of such preferred stock. However, the effects might include, among other things:

restricting dividends on the common stock;

diluting the voting power of the common stock;

impairing the liquidation rights of the common stock; or

delaying or preventing a change in our control without further action by the stockholders.

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

Some provisions of our certificate of incorporation, bylaws, as well as Section 203 of the General Corporation Law of the State of Delaware may contain various provisions intended to promote stability of our stockholder base and render more difficult certain unsolicited or hostile attempts to take us over, which could disrupt us, divert the attention of our directors, executive officers and employees and adversely affect the independence and integrity of our business. A summary of these provisions of our certificate of incorporation, bylaws and Delaware law is set forth below.

Table of Contents

Classified Board; Removal of Directors. Pursuant to our certificate of incorporation, the size of our board of directors shall not be less than three or greater than 21. Our board of directors determines its specific size at any given time. Our certificate of incorporation provides that the directors will be divided into three classes, with each class consisting as nearly as possible in size of one-third of the directors. Directors elected by our stockholders at an annual meeting of stockholders will be elected by a plurality of the votes of the shares present in person or represented by proxy and entitled to vote at such annual meeting.

Our certificate of incorporation provides that except as otherwise provided for or fixed by or pursuant to an amendment to our certificate of incorporation setting forth the rights of the holders of any class or series of preferred stock, newly created directorships resulting from any increase in the number of directors and any vacancies on our board of directors shall be filled by the affirmative vote of a majority of the remaining directors then in office, even though less than a quorum of the board. Any director elected in accordance with the preceding sentence shall be a director of the same class as the director whose vacancy he or she fills and shall hold office until the next annual meeting of stockholders, and until such director's successor shall have been duly elected and qualified. No decrease in the number of directors constituting our board of directors will shorten the term of any incumbent director. Any director may be removed from office for cause at any time by vote of the holders of a majority of the shares then entitled to vote at an election of directors.

These provisions of our certificate of incorporation and bylaws would preclude a third party from removing incumbent directors and simultaneously gaining control of our board of directors by filling the vacancies created by removal with its own nominees. Under the classified board provisions described above, it would take at least two elections of directors for any individual or group to gain control of our board of directors. Accordingly, these provisions could discourage a third party from initiating a proxy contest, making a tender offer or otherwise attempting to gain control of us.

Special Stockholders Meetings and Right to Act by Written Consent. Our bylaws provide that a special meeting of stockholders may be called only by the chairman of our board of directors or our President or upon a resolution adopted by our board of directors. Our stockholders are not permitted to call, or to require that our board of directors call, a special meeting of stockholders. Moreover, the business permitted to be conducted at any special meeting of stockholders is limited to the business brought before the meeting pursuant to the notice of the meeting given by us. Our bylaws provide that any action of stockholders may be taken only at a meeting of the stockholders and may not be taken without a meeting through the execution of a consent or consents thereto by the stockholders.

Procedures for Stockholder Nominations and Proposals. Our bylaws establish an advance notice procedure for stockholders to nominate candidates for election as directors and to propose any new business at any annual meeting. With respect to stockholder nominations and proposals, only persons nominated in accordance with this procedure are eligible to serve as directors, and only business brought before the annual meeting in accordance with this procedure may be conducted at the annual meeting. Under this procedure, notice of stockholder nominations and proposals for new business at the annual meeting, regardless of whether a stockholder seeks inclusion of a proposal in our proxy pursuant to Rule 14a-8 under the Exchange Act, must be received at our principal executive offices not less than 120 calendar days prior to the date of our proxy statement made available to stockholders in connection with the previous year's annual meeting of stockholders, except that, if no annual meeting of stockholders was held in the previous year, or if the date of the annual meeting of stockholders has been changed by more than 30 calendar days from the date contemplated at the time of the previous year's proxy statement, the notice must be received at our principal executive offices not less than the later of (i) 150 calendar days prior to the date of the contemplated annual meeting and (ii) the date that is 10 calendar days after the date of the first public announcement or other notification to the stockholders of the date of the contemplated annual meeting. For nominations and proposals for any special meetings, our bylaws require notice not more than 60 days nor less than 10 days before the special meeting. Our bylaws provide that notice to our secretary with respect to any stockholder nomination or proposal must include certain information regarding the nominee, the proposal and the stockholder nominating a director or proposing business.

Table of Contents

By requiring advance notice of nominations by our stockholders, this procedure will afford our board of directors an opportunity to consider the qualifications of the proposed nominees and, to the extent deemed necessary or desirable by our board of directors, to inform stockholders about such qualifications. By requiring advance notice of other proposed business, this stockholder notice procedure will provide a more orderly procedure for conducting annual meetings of our stockholders and, to the extent deemed necessary or desirable by our board of directors, will provide our board of directors with an opportunity to inform our stockholders, prior to such meetings, of our board of directors' position regarding action to be taken with respect to such business, so that our stockholders can better decide whether to attend such a meeting or to grant a proxy regarding the disposition of any such business.

Although our bylaws do not give our board of directors any power to approve or disapprove stockholder nominations for the election of directors or proposals for action, the Chairman of our board of directors has the power to determine compliance with the stockholder notice procedure described above. Our bylaws also may have the effect of precluding a contest for the election of directors or the consideration of stockholder proposals if the proper procedures are not followed, and of discouraging or deterring a third party from conducting a solicitation of proxies to elect its own slate of directors or to approve its own proposal, without regard to whether consideration of such nominees or proposals might be harmful or beneficial to us and our stockholders.

Authorized but Unissued Shares. The authorized but unissued shares of our common stock and preferred stock are available for future issuance without stockholder approval, subject to various limitations imposed by NASDAQ. These additional shares may be used for a 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 make it more difficult or discourage an attempt to obtain control of us by means of a proxy contest, tender offer, merger or otherwise.

Amendment of Our Certificate of Incorporation and Bylaws. Our certificate of incorporation provides that we reserve the right to amend, alter, change or repeal any provisions contained in our certificate of incorporation in the manner now or hereafter prescribed by law, and all the provisions of our certificate of incorporation and all rights conferred on our stockholders, directors and officers in our certificate of incorporation are subject to this reserved power. Pursuant to Section 242 of the General Corporation Law of the State of Delaware, we may amend our certificate of incorporation, from time to time, in any respect, so long as our certificate of incorporation as amended would contain only such provisions as would be lawful to insert in an original certificate of incorporation filed at the time of the filing of the amendment. Upon approval of such amendment by our board of directors, the affirmative vote of a majority of the outstanding stock entitled to vote on such amendment would be required to effect the amendment to our certificate of incorporation.

In addition, our bylaws provide that the amendment or repeal by our stockholders of any bylaw may be made by the affirmative vote of the holders of a majority of the shares then entitled to vote at an election of directors, except that bylaws governing (i) special meetings of stockholders, (ii) notice of stockholder meetings, (iii) consents of notice, (iv) validity of notice, (v) stockholder action by written consent, (vi) removal of directors, (vii) election of directors, (viii) board vacancies, board classification and board compensation and (ix) amendments to the bylaws may only be amended by the affirmative vote of the holders of not less than 60% of the shares outstanding and entitled to vote at an election of directors. Our certificate of incorporation also provides that, subject to the terms of any series of preferred stock, our bylaws may be amended by our board of directors upon the affirmative vote of a majority of the directors present at any regular or special meeting of the board of directors at which a quorum is present.

Table of Contents

Delaware Anti-Takeover Statute. We are subject to Section 203 of the General Corporation Law of the State of Delaware. This law prohibits a publicly held Delaware corporation from engaging in any business combination with any interested stockholder for a period of three years after the time such stockholder became an interested stockholder unless certain conditions are satisfied. The prohibitions set forth in Section 203 of the General Corporation Law of the State of Delaware do not apply if, among other things:

prior to the date of the transaction, the board of directors of the corporation approved either the business combination or the transaction which resulted in the stockholder becoming an interested stockholder;

upon consummation 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 number of shares outstanding those shares owned by persons who are directors and also officers and by employee stock plans in which employee participants do not have the right to determine confidentially whether shares held subject to the plan will be tendered in a tender or exchange offer; or

on or subsequent to the date of the transaction, the business combination is approved by the board of directors and authorized at an annual or special meeting of stockholders, and not by written consent, by the affirmative vote of at least two-thirds of the outstanding voting stock that is not owned by the interested stockholder.

Section 203 defines "business combination" to include:

any merger or consolidation involving the corporation and the interested stockholder;

any sale, lease, exchange or other disposition, except proportionately as a stockholder of such corporation, to or with the interested stockholder of assets of the corporation having an aggregate market value equal to 10% or more of either the aggregate market value of all the assets of the corporation or the aggregate market value of all the outstanding stock of the corporation;

in general, any transaction that results in the issuance or transfer by the corporation of any of its stock to the interested stockholder;

any transaction involving the corporation which has the effect of increasing the proportionate share of the stock of any class or series, or securities convertible into the stock of any class or series, of the corporation which is owned by the interested stockholder; or

the receipt by the interested stockholder of the benefit of any loans, advances, guarantees, pledges or other financial benefits provided by or through the corporation.

In general, Section 203 defines an "interested stockholder" as:

any person that owns 15% or more of the voting power of outstanding stock of the corporation;

any person that is an affiliate or associate of the corporation and was the owner of 15% or more of the outstanding voting stock of the corporation at any time within the three-year period immediately prior to the date on which it is sought to be determined whether or not such person is an interested stockholder; and

the affiliates or associates of either of the preceding two categories.

Limitation of Liability

Our certificate of incorporation provides that no director shall be personally liable to us or to our stockholders for monetary damages for breach of fiduciary duty as a director, except that the limitation shall not eliminate or limit liability to the extent that the elimination or limitation of such liability is not permitted by the General Corporation Law of the State of Delaware as the same exists or may hereafter be amended.

Table of Contents

Nasdaq National Market Listing

Our common stock is listed on NASDAQ under the symbol VRUS.

Transfer Agent and Registrar

The transfer agent and registrar for our common stock is Computershare Trust Company, N.A., located at 250 Royall Street, Canton, MA 02021. Its telephone number is (781) 575-2879.

Table of Contents

DESCRIPTION OF DEBT SECURITIES

This prospectus describes certain general terms and provisions of our debt securities. When we offer to sell a particular series of debt securities, we will describe the specific terms of the series in a supplement to this prospectus. The following description of debt securities will apply to the debt securities offered by this prospectus unless we provide otherwise in the applicable prospectus supplement. The applicable prospectus supplement for a particular series of debt securities may specify different or additional terms.

We may offer under this prospectus up to \$150,000,000 aggregate principal amount of secured or unsecured debt securities, or if debt securities are issued at a discount, or in a foreign currency or composite currency, such principal amount as may be sold for an initial public offering price of up to \$150,000,000. The debt securities may be either senior debt securities, senior subordinated debt securities or subordinated debt securities. The debt securities offered hereby will be issued under an indenture between us and a trustee. A form of indenture, which will be qualified under, subject to, and governed by, the Trust Indenture Act of 1939, as amended, is filed as an exhibit to the Registration Statement.

General

The terms of each series of debt securities will be established by or pursuant to a resolution of our board of directors and detailed or determined in the manner provided in a board of directors resolution, an officers certificate or by a indenture. The particular terms of each series of debt securities will be described in a prospectus supplement relating to the series, including any pricing supplement.

We can issue debt securities that may be in one or more series with the same or various maturities, at par, at a premium or at a discount. We will set forth in a prospectus supplement, including any pricing supplement, relating to any series of debt securities being offered the initial offering price, the aggregate principal amount and the following terms of the debt securities:

the title of the debt securities;

the price or prices (expressed as a percentage of the aggregate principal amount) at which we will sell the debt securities;

any limit on the aggregate principal amount of the debt securities;

the date or dates on which we will pay the principal on the debt securities;

the rate or rates (which may be fixed or variable) per annum or the method used to determine the rate or rates (including any commodity, commodity index, stock exchange index or financial index) at which the debt securities will bear interest, the date or dates from which interest will accrue, the date or dates on which interest will commence and be payable and any regular record date for the interest payable on any interest payment date;

the place or places where the principal of, premium, and interest on the debt securities will be payable;

the terms and conditions upon which we may redeem the debt securities;

any obligation we have to redeem or purchase the debt securities pursuant to any sinking fund or analogous provisions or at the option of a holder of debt securities;

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the dates on which and the price or prices at which we will repurchase the debt securities at the option of the holders of debt securities and other detailed terms and provisions of these repurchase obligations;

the denominations in which the debt securities will be issued, if other than denominations of \$1,000 and any integral multiple thereof;

whether the debt securities will be issued in the form of certificated debt securities or global debt securities;

Table of Contents

the portion of principal amount of the debt securities payable upon declaration of acceleration of the maturity date, if other than the principal amount;

the currency of denomination of the debt securities;

the designation of the currency, currencies or currency units in which payment of principal of, premium and interest on the debt securities will be made;

if payments of principal of, premium or interest on the debt securities will be made in one or more currencies or currency units other than that or those in which the debt securities are denominated, the manner in which the exchange rate with respect to these payments will be determined;

the manner in which the amounts of payment of principal of, premium or interest on the debt securities will be determined, if these amounts may be determined by reference to an index based on a currency or currencies other than that in which the debt securities are denominated or designated to be payable or by reference to a commodity, commodity index, stock exchange index or financial index;

any provisions relating to any security provided for the debt securities;

any addition to or change in the events of default described in this prospectus or in the indenture with respect to the debt securities and any change in the acceleration provisions described in this prospectus or in the indenture with respect to the debt securities;

any addition to or change in the covenants described in this prospectus or in the indenture with respect to the debt securities;

any other terms of the debt securities, which may modify or delete any provision of the indenture as it applies to that series; and

any depositaries, interest rate calculation agents, exchange rate calculation agents or other agents with respect to the debt securities. We may issue debt securities that are exchangeable and/or convertible into shares of our common stock or any class or series of preferred stock. The terms, if any, on which the debt securities may be exchanged for and/or converted will be set forth in the applicable prospectus supplement. Such terms may include provisions for conversion, either mandatory, at the option of the holder or at our option, in which case the number of shares of common stock, preferred stock or other securities to be received by the holders of debt securities would be calculated as of a time and in the manner stated in the prospectus supplement.

We may issue debt securities that provide for an amount less than their stated principal amount to be due and payable upon declaration of acceleration of their maturity pursuant to the terms of the indenture. We will provide you with information on the federal income tax considerations and other special considerations applicable to any of these debt securities in the applicable prospectus supplement.

If we denominate the purchase price of any of the debt securities in a foreign currency or currencies or a foreign currency unit or units, or if the principal of and any premium and interest on any series of debt securities is payable in a foreign currency or currencies or a foreign currency unit or units, we will provide you with information on the restrictions, elections, general tax considerations, specific terms and other information with respect to that issue of debt securities and such foreign currency or currencies or foreign currency unit or units in the applicable prospectus supplement.

Payment of Interest and Exchange

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Each debt security will be represented by either one or more global securities registered in the name of The Depository Trust Company, as Depository, or a nominee of the Depository (we will refer to any debt security represented by a global debt security as a book-entry debt security), or a certificate issued in definitive registered form (we will refer to any debt security represented by a certificated security as a certificated debt security), as described in the applicable prospectus supplement.

Table of Contents

Certificated Debt Securities

You may transfer or exchange certificated debt securities at the trustee's office or paying agencies in accordance with the terms of the indenture. No service charge will be made for any transfer or exchange of certificated debt securities, but we may require payment of a sum sufficient to cover any tax or other governmental charge payable in connection with a transfer or exchange.

You may transfer certificated debt securities and the right to receive the principal of, premium and interest on certificated debt securities only by surrendering the old certificate representing those certificated debt securities and either we or the trustee will reissue the old certificate to the new holder or we or the trustee will issue a new certificate to the new holder.

Book-Entry Debt Securities

We may issue the debt securities of a series in the form of one or more book-entry debt securities that would be deposited with a depository or its nominee identified in the prospectus supplement. We may issue book-entry debt securities in either temporary or permanent form. We will describe in the prospectus supplement the terms of any depository arrangement and the rights and limitations of owners of beneficial interests in any book-entry debt security.

Table of Contents

DESCRIPTION OF WARRANTS

We may issue warrants to purchase debt securities, common stock, preferred stock or other securities or any combination of the foregoing. We may issue warrants independently or together with other securities. Warrants sold with other securities may be attached to or separate from the other securities. We will issue warrants under one or more warrant agreements between us and a warrant agent that we will name in the prospectus supplement.

The prospectus supplement relating to any warrants that we may offer will include specific terms relating to the offering. We will file the form of any warrant agreement with the SEC, and you should read the warrant agreement for provisions that may be important to you. The prospectus supplement will include some or all of the following terms:

the title of the warrants;

the aggregate number of warrants offered;

the designation, number and terms of the debt securities, common stock, preferred stock or other securities purchasable upon exercise of the warrants, and procedures by which those numbers may be adjusted;

the exercise price of the warrants;

the dates or periods during which the warrants are exercisable;

the designation and terms of any securities with which the warrants are issued;

if the warrants are issued as a unit with another security, the date, if any, on and after which the warrants and the other security will be separately transferable;

if the exercise price is not payable in U.S. dollars, the foreign currency, currency unit or composite currency in which the exercise price is denominated;

any minimum or maximum amount of warrants that may be exercised at any one time;

any terms, procedures and limitations relating to the transferability, exchange, exercise, amendment or termination of the warrants; and

any adjustments to the terms of the warrants resulting from the occurrence of certain events or from the entry into or consummation by us of certain transactions.

Table of Contents

DESCRIPTION OF UNITS

The following description, together with the additional information we include in any applicable prospectus supplement, summarizes the material terms and provisions of the units that we may offer under this prospectus. Units may be offered independently or together with common stock, preferred stock, debt securities and/or warrants offered by any prospectus supplement, and may be attached to or separate from those securities. While the terms we have summarized below will generally apply to any future units that we may offer under this prospectus, we will describe the particular terms of any series of units that we may offer in more detail in the applicable prospectus supplement. The terms of any units offered under a prospectus supplement may differ from the terms described below.

We will incorporate by reference into the Registration Statement the form of unit agreement, including a form of unit certificate, if any, that describes the terms of the series of units we are offering before the issuance of the related series of units. The following summaries of material provisions of the units and the unit agreements are subject to, and qualified in their entirety by reference to, all the provisions of the unit agreement applicable to a particular series of units. We urge you to read the applicable prospectus supplements related to the units that we sell under this prospectus, as well as the complete unit agreements that contain the terms of the units.

General

We may issue units comprised of one or more shares of common stock or preferred stock, debt securities and warrants in any combination. Each unit will be issued so that the holder of the unit is also the holder of each security included in the unit. Thus, the holder of a unit will have the rights and obligations of a holder of each included security. The unit agreement under which a unit is issued may provide that the securities included in the unit may not be held or transferred separately, at any time or at any time before a specified date.

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

the designation and terms of the units and of the securities comprising the units, including whether and under what circumstances those securities may be held or transferred separately;

the rights and obligations of the unit agent, if any;

any provisions of the governing unit agreement that differ from those described below; and

any provisions for the issuance, payment, settlement, transfer or exchange of the units or of the securities comprising the units. The provisions described in this section, as well as those described under Description of Capital Stock, Description of Debt Securities and Description of Warrants, will apply to each unit and to any common stock, preferred stock, debt securities or warrants included in each unit, respectively.

Issuance in Series

We may issue units in such amounts and in numerous distinct series as we determine.

Table of Contents

PLAN OF DISTRIBUTION

We may sell the securities being offered pursuant to this prospectus directly to purchasers, to or through underwriters, through dealers or agents, or through a combination of such methods. The prospectus supplement with respect to the securities being offered will set forth the terms of the offering of those securities, including the names of the underwriters, dealers or agents, if any, the purchase price, the net proceeds to us, any underwriting discounts and other items constituting underwriters' compensation, the initial public offering price, any discounts or concessions allowed or reallocated or paid to dealers and any securities exchanges on which such securities may be listed.

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

If dealers are used in an offering, we will sell the securities to the dealers as principals. The dealers then may resell the securities to the public at varying prices which they determine at the time of resale. The names of the dealers and the terms of the transaction will be specified in a prospectus supplement.

The securities may be sold directly by us or through agents we designate from time to time at a fixed price or prices, which may be changed, or at varying prices determined at the time of sale. If agents are used in an offering, the names of the agents and the terms of the agency will be specified in a prospectus supplement. Unless otherwise indicated in a prospectus supplement, the agents will act on a best-efforts basis for the period of their appointment.

Dealers and agents named in a prospectus supplement may be deemed to be underwriters (within the meaning of the Securities Act) of the securities described therein. In addition, we may sell the securities directly to institutional investors or others who may be deemed to be underwriters within the meaning of the Securities Act with respect to any resales thereof.

Underwriters, dealers and agents may be entitled to indemnification by us against specific civil liabilities, including liabilities under the Securities Act, or to contribution with respect to payments which the underwriters or agents may be required to make in respect thereof, under underwriting or other agreements. The terms of any indemnification provisions will be set forth in a prospectus supplement. Certain underwriters, dealers or agents and their associates may engage in transactions with and perform services for us in the ordinary course of business.

If so indicated in a prospectus supplement, we will authorize underwriters or other persons acting as our agents to solicit offers by institutional investors to purchase securities pursuant to contracts providing for payment and delivery on a future date. We may enter contracts with commercial and savings banks, insurance companies, pension funds, investment companies, educational and charitable institutions and other institutional investors. The obligations of any institutional investor will be subject to the condition that its purchase of the offered securities will not be illegal at the time of delivery. The underwriters and other agents will not be responsible for the validity or performance of such contracts.

Table of Contents

Each series of securities will be a new issue of securities and will have no established trading market (other than our common stock). Any common stock sold pursuant to a prospectus supplement will be eligible for trading on NASDAQ, subject, if required, to official notice of issuance, or such other trading market as specified in a prospectus supplement. Any securities sold pursuant to a prospectus supplement, other than our common stock, may or may not be listed on a national securities exchange or approved for trading on any other trading market.

LEGAL MATTERS

Unless otherwise indicated in the applicable prospectus supplement, legal matters related to the securities offered under this prospectus and any offerings made pursuant to this prospectus will be passed upon by Pepper Hamilton LLP, Philadelphia, Pennsylvania. If legal matters in connection with any offering made pursuant to this prospectus are passed upon by counsel other than Pepper Hamilton LLP, such counsel will be named in the prospectus supplement relating to such offering.

EXPERTS

The financial statements of Pharmasset, Inc. as of September 30, 2009 and 2008 and for each of the three years in the period ended September 30, 2009 and management's assessment of the effectiveness of internal control over financial reporting as of September 30, 2009 of Pharmasset, Inc. appearing in its Annual Report on Form 10-K and incorporated herein by reference have been so incorporated by reference in reliance upon the reports of Grant Thornton LLP, independent registered public accountants, upon the authority of such firm as experts in accounting and auditing in giving said reports.

Table of Contents

3,200,000 Shares

Pharmasset, Inc.

Common Stock

PROSPECTUS SUPPLEMENT

May 13, 2010

Citi

J.P.Morgan

Baird

Canaccord Genuity

