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FOIA CONFIDENTIAL TREATMENT REQUEST Requested by Syndax Pharmaceuticals, Inc.

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January 12, 2016

BY COURIER

Ms. Suzanne Hayes Assistant Director Division of Corporation Finance Securities and Exchange Commission 100 F Street, N.E. Washington, D.C. 20549

Re: Syndax Pharmaceuticals, Inc.
Registration Statement on Form S-1
Filed January 4, 2016
File No. 333-208861

Dear Ms. Hayes:

On behalf of Syndax Pharmaceuticals, Inc. (the "Company"), this letter is in response to the above referenced Registration Statement on Form S-1 (File No. 333-208861) (the "Registration Statement") originally filed with the Securities and Exchange Commission (the "Commission") on January 4, 2016.

This letter is being filed in response to comments, containing in the letter dated September 22, 2015 from the Staff (the "Staff") to Briggs W. Morrison, M.D. (the "Comment Letter"), relating to the Company's confidential draft registration statement on Form S-1, as submitted to the Commission on August 25, 2015. For ease of reference, the Staff's comment is set forth in italic type immediately before the corresponding response submitted on behalf of the Company, and the numbering below corresponds to the numbering in the Comment Letter. References to page numbers in the Company's responses refer to page numbers in the Registration Statement.

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Management's Discussion and Analysis of Financial Condition and Results of Operations

Critical Accounting Policies and Use of Estimates

Stock-Based Compensation and Common Stock Valuation, page 65

4. We may have additional comments on your accounting for equity issuances including stock compensation and beneficial conversion features. Once you have an estimated offering price, please provide us an analysis explaining the reasons for the differences between recent valuations of your common stock leading up to the IPO and the estimated offering price.

The Preliminary IPO Price Range

The Company respectfully advises the Staff that the Company currently expects a price range of \$[***] to \$[***] per share (the "**Preliminary IPO Price Range**") for its initial public offering ("**IPO**"), which takes into account an estimated [***]-for-[***] forward stock split of the Company's capital stock (the "**Stock Split**"), representing approximately a \$[***] million pre-money valuation at the midpoint of the Preliminary IPO Price Range. Share numbers, as well as all option exercise prices and estimated fair market values of common stock referred to in this letter, have been adjusted to reflect the Stock Split. The Company advises the Staff that it plans to implement the Stock Split prior to effectiveness of the Registration Statement and that it will set forth a bona fide initial offering price range in a pre-effective amendment to the Registration Statement prior to the distribution of any preliminary prospectus. The parameters of that price range will be subject to then-current market conditions, continuing discussions with the underwriters, and any further business, market or other developments impacting the Company.

As is typical in initial public offerings, the Preliminary IPO Price Range for the Company's IPO was not derived using a formal determination of fair market value, but was determined based on the Company's best estimates following discussions between the Company, its board of directors (the "**Board**") and the managing underwriters of the IPO, that took place between late December 2015 and January 4, 2016. Among the factors that were considered in setting the Preliminary IPO Price Range were the following:

- an analysis of the valuation ranges seen in recent initial public offerings for companies in the Company's industry;
- the general condition of the securities markets and the recent market prices of, and the demand for, publicly traded common stock of generally comparable companies; and
- assumptions regarding the demand for the Company's common stock and the public trading market for biopharmaceutical companies, such as the Company.

The Company believes that the difference in value reflected between the fair market value of its common stock for each equity issuance since December 2014 and the Preliminary IPO Price Range of this offering is the result of the key factors noted below, as well as the subsequent increase in the probability applied to the IPO scenario, the reduction in the time horizon to the anticipated IPO exit date and the continued development progress of the Company.

- The managing underwriters' assessment of the specific supply and demand characteristics of the market at or near the date of the actual pricing, which was not available as of the valuation date.
- Updated market conditions used in the determination of the Preliminary IPO Price Range after discussions with the managing underwriters for this offering.

- Unlike the valuation methodologies used in connection with the Company's historical equity issuances, the Preliminary IPO Price Range
 does not take into account the probability of alternative outcomes that could yield lower valuations, such as an acquisition at differing
 valuations or that the Company may continue as a private, stand-alone entity.
- The Preliminary IPO Price Range represents a price per share of common stock that would be immediately tradeable without any restrictions, while the estimated fair market value of the historical equity grants took into account that the Company's common stock was then illiquid, may never become liquid and, even if an IPO were successfully completed, would remain illiquid at least until the expiration of the 180-day lockup period following the IPO.
- The valuation methodologies used in connection with the Company's historical equity issuances reflect the fact that the holders of the Company's preferred stock currently enjoy substantial economic rights and preferences over the holders of its common stock, including the right to receive dividends prior to any dividends declared or paid on any shares of the Company's common stock and liquidation payments in preference to holders of common stock. The Preliminary IPO Price Range value assumes the conversion of all of the Company's convertible preferred stock upon the completion of the IPO and the elimination of the preferred stock's preferences, which results in a higher value being attributable to the common stock.
- The successful completion of the IPO would strengthen the Company's balance sheet, provide access to public equity and provide enhanced operational flexibility, increasing the value of the Company's common stock compared to that of a private company.

The determination of the fair market value of the Company's common stock at each grant date since December 2014 was consistent with its past practice and consistent with the American Institute of Certified Public Accountants Practice Aid, Valuation of Privately-Held-Company Equity Securities Issued as Compensation (the "**Practice Aid**").

Stock Option Grants and Valuations

The Company has granted stock options during the period from December 2014 through the date of this letter as follows:

Date of grant	Number of shares subject to options granted	Exercise price per share of common stock	Estimated fair market value per share of common stock
December 18, 2014	[***]	\$[***]	\$[***]
June 1, 2015	[***]	\$[***]	\$[***]
June 1, 2015	[***]*	\$[***]	\$[***]
June 30, 2015	[***]	\$[***]	\$[***]
August 18, 2015	[***]	\$[***]	\$[***]
August 20, 2015	[***]	\$[***]	\$[***]
September 9, 2015	[***]	\$[***]	\$[***]
December 2, 2015	[***]	\$[***]	\$[***]

^{*} Non-qualified stock option granted to a consultant.

The estimated fair market value of the common stock underlying stock options was determined at each grant date by the Company's Board and was supported by periodic independent third-party valuations. In addition to reviewing the most recent valuation report, the Board considered numerous objective and subjective factors, including the factors set forth on pages 68 and 69 of the Registration Statement, as well as the status of the Company's IPO. The Board, as applicable, also determined that the assumptions and inputs used in connection with such valuations reflect the Board's and management's best estimate of the business condition, prospects and operating performance of the Company at each valuation date. The additional factors considered when determining any changes in fair market value between the most recent valuation and the grant date include, when applicable, the Company's stage of development, the Company's clinical, operating and financial performance and business and financial market conditions generally and in the biotechnology sector specifically.

December 18, 2014 Grant

On December 18, 2014, the Company granted options to purchase a total of [***] shares of common stock at an exercise price of \$[***] per share.

The Company determined the fair market value at the time of grant was \$[***] based on an independent third-party valuation of its common stock as of September 30, 2014 (the "September 2014 Valuation") and an evaluation of factors occurring since that valuation. In accordance with the Practice Aid, the Company used the market approach in the September 2014 Valuation to determine the projected equity values for the Company under various liquidity scenarios in the Probability-Weighted Expected Return Method ("PWERM"). In the application of the market approach, the projected equity values were based on a review of both guideline IPO and merger and acquisition transactions involving biotechnology and pharmaceutical companies that were considered comparable to the Company. The equity value in each liquidity scenario was allocated to the outstanding securities using the PWERM and considered the respective liquidation preferences and rights of each security. The independent valuation specialist used assumptions with respect to the IPO liquidity event, specifically the estimated time to occurrence of four months and a probability weighting of 60.0%. The applied discount for lack of marketability due to the Company being privately held was 7.5% in the IPO scenario.

In addition to the general factors noted above and receipt of the September 2014 Valuation, the Board assessed several company-specific factors in its valuation of the Company's common stock, including (i) the Company's progress in its negotiations with Kyowa Hakko Kirin Co., Ltd. ("KHK") to license entinostat and (ii) the continued progress with the Company's preclinical and clinical development programs. The Company's Board noted that no new substantive scientific data was available to the Company, and there were no substantive changes in the Company's financial position or commercial prospects over the period from the September 2014 Valuation to the December 18, 2014 grant date that might have warranted a change in the Board's determination of fair value or warranted obtaining an updated independent third-party valuation. As a result, the Board determined the fair market value of the stock as of December 18, 2014 was \$[***] per share.

June 1, 2015 and June 30, 2015 Grants

On June 1, 2015 and June 30, 2015, the Company granted options to purchase a total of [***] shares of common stock at an exercise price of \$[***] per share and options to purchase a total of [***] shares of common stock at an exercise price of \$[***] per share.

The Company determined the fair market value at the time of grant was \$[***] based on an independent third-party valuation of its common stock as of June 1, 2015 (the "June 2015 Valuation"). The June 2015 Valuation was obtained in connection with the Company's June 1, 2015 closing of the initial round of the Series C-1 convertible preferred stock financing for \$18.8 million at a price of \$[***] per share, the Company received an independent third-party valuation of its common stock as of June 1, 2015, which established \$[***] per share as the value of the common stock. The June 2015 Valuation valued the Company's common stock lower than the Series C-1 convertible preferred stock due to the fact that the holders of the Company's preferred stock enjoy substantial economic rights and preferences over the holders of its common stock, including the right to receive dividends prior to any dividends declared or paid on any shares of the Company's common stock and liquidation payments in preference to holders of common stock. In accordance with the Practice Aid, the Company used the market approach in this contemporaneous valuation to determine the projected equity values for the Company under various liquidity scenarios in the PWERM. The independent valuation specialist utilized assumptions with respect to the IPO liquidity event. Specifically, the estimated time to occurrence was changed from four months to five months and a probability weighting of 60.0% was applied based on the Company's withdrawal of its 2014 Registration Statement on Form S-1 in January 2015 and revised IPO timing assumption of year-end 2015. The applied discount for lack of marketability due to the Company being privately held was increased to 10.0% in the IPO scenario.

In addition to the general factors noted above and receipt of the June 2015 Valuation, the Board assessed several company-specific factors in its valuation of the Company's common stock, including (i) entering into the aforementioned licensing agreement with KHK on December 19, 2014, and the receipt of related upfront payments in January 2015, (ii) entering into a collaboration agreement with MSD International GmbH on March 27, 2015, (iii) additions to the leadership team, and (iv) the continued progress with the Company's preclinical and clinical development programs. As a result of the June 2015 Valuation and the Board's analysis of additional factors, the Board determined the fair market value of the stock as of June 1, 2015 was \$[***] per share.

Pursuant to a consulting agreement, the Company granted options to purchase [***] shares of common stock with an exercise price of \$[***] per share to a consultant on June 1, 2015 and recorded stock-based compensation based on the fair market value of \$[***] per share as of the June 2015 Valuation.

The Company's Board determined that the events and circumstances occurring between the June 2015 Valuation and June 30, 2015 grant date did not indicate a change in the fair market value of the Company's common stock. The facts and circumstances considered by the Company's Board included the Company's continued progress with its preclinical and clinical development programs, but the Company's Board noted that no new substantive scientific data was available to the Company, and there were no substantive changes in the Company's financial position or commercial prospects that might have warranted a change in the Board's determination of fair value or warranted obtaining an updated independent third-party valuation as of the June 30, 2015 grant date. As a result, the Board determined the fair market value of the stock as of June 30, 2015 was \$[***] per share.

August 18, 2015 and August 20, 2015 Grants

On August 18, 2015 and August 20, 2015, the Company granted options to purchase a total of [***] shares of common stock at an exercise price of \$[***] per share. The Company determined the fair market value at the time of grant was \$[***] based on the June 2015 Valuation. In connection with the Company's August 21, 2015 closing of the second round of its Series C-1 convertible preferred stock financing for \$61.2 million at a price of \$[***] per share, the Company received an independent third-party valuation of its common stock as of August 21, 2015, which established \$[***] per share as the fair market value of the common stock (the "August 2015 Valuation").

In accordance with the Practice Aid, the Company used the market approach in the August 2015 Valuation to determine the projected equity values for the Company under various liquidity scenarios in the PWERM. The independent valuation specialist utilized assumptions with respect to the IPO liquidity event, specifically the estimated time to occurrence was reduced to approximately two months and a probability weighting of 75.0%. The applied discount for lack of marketability due to the Company being privately held was 5.0% in the IPO scenario.

In addition to the general factors noted above and the receipt of the August 2015 Valuation, the Board assessed several company-specific factors in its valuation of the Company's common stock, including (i) the Company's progress in its efforts to enter into a collaboration agreement with Genentech, Inc., (ii) the Company's higher than anticipated demand for its Series C-1 convertible preferred stock from sophisticated crossover investors, (iii) the Company's progress with its IPO, specifically the Company's plan to submit its confidential registration statement, and (iv) the continued progress with the Company's preclinical and clinical development programs. As a result of the August 2015 Valuation and the Board's analysis of additional factors, the Board determined the fair market value of the stock as of August 21, 2015 was \$[***] per share. Further, based on the August 2015 Valuation, the Company retrospectively adjusted the fair value of the common stock for financial reporting purposes for the options granted on August 18, 2015 and August 20, 2015 to \$[****] per share.

September 9, 2015 Grant

The Company's Board determined that the events and circumstances occurring between the August 2015 Valuation and September 9, 2015 did not indicate a change in the fair market value of the Company's common stock. The facts and circumstances considered by the Company's Board included the Company's continued progress with its preclinical and clinical development programs, but the Company's Board noted that no new substantive scientific data was available to the Company, and there were no substantive changes in the Company's financial position or commercial prospects that might have warranted a change in fair value or warranted obtaining an updated independent third-party valuation as of the September 9, 2015 grant date. As a result, the Board determined the fair market value of the stock as of September 9, 2015 was \$[***] per share.

December 2, 2015 Grant

On December 2, 2015, the Company granted options to purchase a total of [***] shares of common stock at an exercise price of \$[***] per share.

The Company determined the fair market value at the time of grant was \$[***] based on an independent third-party valuation of its common stock as of December 1, 2015 (the "**December 2015 Valuation**"). In accordance with the Practice Aid, the Company used the market approach to determine the projected equity values for the Company under various liquidity scenarios in the PWERM. The independent valuation specialist utilized assumptions with respect to the IPO liquidity event, specifically the estimated time to occurrence of approximately two months and a probability weighting of 75.0%. The applied discount for lack of marketability due to the Company being privately held was 5.0% in the IPO scenario.

In addition to the general factors noted above, the Board assessed several company-specific factors in its valuation of the Company's common stock, including (i) the Company's progress in its efforts to enter into a collaboration agreement with Pfizer Inc. and Ares Trading S.A., (ii) the Company's progress with its IPO, specifically the Company's plans to publicly file its registration statement shortly after the valuation date based on advice of its underwriters, and (iii) the continued progress with the Company's preclinical and clinical development programs. As a result of the December 2015 Valuation and the Board's analysis of additional factors, the Board determined the fair market value of the stock as of December 2, 2015 was \$[***] per there

The Company acknowledges that the exercise price of the December 2, 2015 options is below the Preliminary IPO Price Range. The Company believes that the primary difference between the fair market value of common stock as of the December 2015 Valuation and the estimated Preliminary IPO Price Range is attributable to: (i) the execution of an important clinical trial collaboration agreement with Pfizer Inc. and Ares Trading S.A, on January 4, 2016, which provided validation of the potential for entinostat to be useful in combination with other immune-oncology agents; and (ii) significant progress on the Company's clinical development plan, including the presentation of positive preclinical and clinical data related to entinostat at both the San Antonio Breast Cancer Symposium on December 8-12, 2015 and at the Genitourinary Cancers Symposium on January 7-9, 2016. The difference in valuation is also attributed to the IPO probability assumption and the time horizon to the anticipated IPO date. If the IPO scenario were assigned a 100% probability, the estimated fair market value as of December 2, 2015 would have been \$[***] per share, reflecting the elimination of the liquidation preference that was included in the sale scenarios. Furthermore, if the discount for lack of marketability were eliminated, the estimated fair market value as of December 2, 2015 would have been \$[***] per share.

The Company further advises the Staff that, while it has not completed its accounting for the December 2015 options, as it is currently in the process of closing its books for the fourth quarter, it does anticipate that, assuming the successful completion of the planned IPO before [***], it would retrospectively adjust the fair value of the common stock for financial reporting purposes equal to the initial offering price. Using the mid-point of the estimated price range of \$[***] per share rather than the \$[***] per share as the exercise price of these options, the Company will recognize incremental stock compensation expense of \$[***] over the three-year vesting period.

The Company respectfully requests the Staff's assistance in completing the review of this response as soon as possible. Please advise us if we can provide any further information or assistance to facilitate your review. If the Staff should have any questions, or would like further information, concerning any of the responses above, please do not hesitate to contact the undersigned at (202) 637-5457 or Laura A. Berezin at (650) 463-4194. We thank you in advance for your attention to the above.

Sincerely,

/s/ Jaime L. Chase

Jaime L. Chase

cc: Briggs W. Morrison, M.D., Syndax Pharmaceuticals, Inc. Michael A. Metzger, Syndax Pharmaceuticals, Inc. John S. Pallies, Syndax Pharmaceuticals, Inc. Laura A. Berezin, Esq., Hogan Lovells US LLP Divakar Gupta, Esq., Cooley LLP Joshua A. Kaufman, Esq., Cooley LLP David G. Peinsipp, Esq., Cooley LLP