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**UNITED STATES  
SECURITIES AND EXCHANGE COMMISSION**

Washington, D.C. 20549

**FORM 10-Q**

(Mark One)

**QUARTERLY REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934**

For the quarterly period ended March 31, 2018

OR

**TRANSITION REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934**

For the transition period from to

Commission file number: 001-37526

**Zynerba Pharmaceuticals, Inc.**

(Exact name of registrant as specified in its charter)

**Delaware**

(State or other jurisdiction of  
incorporation or organization)

**26-0389433**

(I.R.S. Employer  
Identification Number)

**80 W. Lancaster Avenue, Suite 300  
Devon, PA**

(Address of principal executive offices)

**19333**

(Zip Code)

**(484) 581-7505**

(Registrant's telephone number, including area code)

Indicate by check mark whether the registrant (1) has filed all reports required to be filed by Section 13 or 15(d) of the Securities Exchange Act of 1934 during the preceding 12 months (or for such shorter period that the registrant was required to file such reports), and (2) has been subject to such filing requirements for the past 90 days.  Yes  No

Indicate by check mark whether the registrant has submitted electronically and posted on its corporate Web site, if any, every Interactive Data File required to be submitted and posted pursuant to Rule 405 of Regulation S-T (§232.405 of this chapter) during the preceding 12 months (or for such shorter period that the registrant was required to submit and post such files).  Yes  No

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

Large accelerated filer

Non-accelerated filer

Accelerated filer

Smaller reporting company

Emerging growth company

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

Indicate by check mark whether the registrant is a shell company (as defined in Rule 12b-2 of the Exchange Act). Yes  No

As of May 4, 2018, there were 13,561,373 shares of Common Stock, \$0.001 par value per share, outstanding.

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### CAUTIONARY NOTE REGARDING FORWARD-LOOKING STATEMENTS

Statements made in this Quarterly Report that are not statements of historical or current facts, such as those under the heading “Management’s Discussion and Analysis of Financial Condition and Results of Operations,” are “forward-looking statements” within the meaning of the Private Securities Litigation Reform Act of 1995. Forward-looking statements discuss our current expectations and projections relating to our financial condition, results of operations, plans, objectives, future performance and business. These statements may be preceded by, followed by or include the words “aim,” “anticipate,” “believe,” “estimate,” “expect,” “forecast,” “intend,” “outlook,” “plan,” “potential,” “project,” “projection,” “seek,” “may,” “could,” “would,” “will,” “should,” “can,” “can have,” “likely,” the negatives thereof and other words and terms of similar meaning.

Forward-looking statements are inherently subject to risks, uncertainties and assumptions; they are not guarantees of performance. You should not place undue reliance on these statements. We have based these forward-looking statements on our current expectations and projections about future events. Although we believe that our assumptions made in connection with the forward-looking statements are reasonable, we cannot assure you that the assumptions and expectations will prove to be correct.

You should understand that the following important factors could affect our future results and could cause those results or other outcomes to differ materially from those expressed or implied in our forward-looking statements:

- our estimates regarding expenses, future revenue, capital requirements and timing and availability of and the need for additional financing;
- the success and timing of our preclinical studies and clinical trials;
- the potential results of preclinical studies and clinical trials for ZYN002 and ZYN001;
- our dependence on third parties in the conduct of our preclinical studies and clinical trials;
- the difficulties and expenses associated with obtaining and maintaining regulatory approval of ZYN002 and ZYN001;
- our plans and ability to develop and commercialize ZYN002 and ZYN001;
- the successful development of our commercialization capabilities, including sales and marketing capabilities;
- the size and growth of the potential markets for ZYN002 and ZYN001, the rate and degree of market acceptance of ZYN002 and ZYN001 and our ability to serve those markets;
- legal and regulatory developments in the United States and foreign countries;
- the success of competing therapies and products that are or become available;
- our ability to limit our exposure under product liability lawsuits;
- our ability to obtain and maintain intellectual property protection for ZYN002 and ZYN001;
- recently enacted and future legislation regarding the healthcare system, including changes to the Patient Protection and Affordable Care Act;
- our ability to obtain and maintain third-party manufacturing for our product candidates on commercially reasonable terms;
- the performance of third parties upon which we depend, including contract research organizations, or CROs, contract manufacturing organizations, or CMO’s, contractor laboratories and independent contractors;
- our ability to recruit or retain key scientific, commercial or management personnel or to retain our executive officers; and
- the other risks, uncertainties and factors discussed in our Annual Report on Form 10-K for the fiscal year ended December 31, 2017, or our 2017 Annual Report, under the caption “Item 1.A Risk Factors”.

In light of these risks and uncertainties, expected results or other anticipated events or circumstances discussed in this Form 10-Q (including the exhibits hereto) might not occur. We undertake no obligation, and specifically decline any obligation, to publicly update or revise any forward-looking statements, even if experience or future developments make it clear that projected results expressed or implied in such statements will not be realized, except as may be required by law.

## PART I – FINANCIAL INFORMATION

## Item 1. Consolidated Financial Statements (Unaudited)

ZYNERBA PHARMACEUTICALS, INC.  
CONSOLIDATED BALANCE SHEETS  
(UNAUDITED)

	March 31, 2018	December 31, 2017
<b>Assets</b>		
Current assets:		
Cash and cash equivalents	\$ 52,131,598	\$ 62,510,277
Incentive and tax receivables	4,044,721	3,983,604
Prepaid expenses and other current assets	1,788,997	1,733,701
Total current assets	57,965,316	68,227,582
Property and equipment, net	155,334	164,527
Incentive and tax receivables	1,118,782	—
Other assets	662,200	662,200
Total assets	\$ 59,901,632	\$ 69,054,309
<b>Liabilities and Stockholders' Equity</b>		
Current liabilities:		
Accounts payable	\$ 4,605,850	\$ 3,355,255
Accrued expenses	4,131,529	3,915,491
Deferred grant revenue	171,975	171,975
Total current liabilities	8,909,354	7,442,721
Deferred grant revenue, long-term	662,000	662,000
Total liabilities	9,571,354	8,104,721
Stockholders' equity:		
Preferred stock, \$0.001 par value; 10,000,000 shares authorized; no shares issued or outstanding	—	—
Common stock, \$0.001 par value; 200,000,000 shares authorized; 13,561,373 shares issued and outstanding at March 31, 2018 and 13,553,873 shares issued and outstanding at December 31, 2017	13,561	13,554
Additional paid-in capital	140,603,917	138,916,900
Accumulated deficit	(90,287,200)	(77,980,866)
Total stockholders' equity	50,330,278	60,949,588
Total liabilities and stockholders' equity	\$ 59,901,632	\$ 69,054,309

See accompanying notes to unaudited consolidated financial statements.

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**ZYNERBA PHARMACEUTICALS, INC.  
CONSOLIDATED STATEMENTS OF OPERATIONS  
(UNAUDITED)**

	<b>Three months ended March 31,</b>	
	<b>2018</b>	<b>2017</b>
Operating expenses:		
Research and development	\$ 8,975,513	\$ 5,491,455
General and administrative	3,420,623	2,211,793
Total operating expenses	<u>12,396,136</u>	<u>7,703,248</u>
Loss from operations	(12,396,136)	(7,703,248)
Other income (expense):		
Interest income	175,184	76,885
Foreign exchange (loss) gain	(85,382)	367,342
Total other income (expense)	<u>89,802</u>	<u>444,227</u>
Net loss	<u>\$ (12,306,334)</u>	<u>\$ (7,259,021)</u>
Net loss per share basic and diluted	\$ (0.91)	\$ (0.60)
Basic and diluted weighted average shares outstanding	<u>13,467,694</u>	<u>12,067,453</u>

See accompanying notes to unaudited consolidated financial statements.

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**ZYNERBA PHARMACEUTICALS, INC.  
CONSOLIDATED STATEMENT OF STOCKHOLDERS' EQUITY  
(UNAUDITED)**

	Common stock		Additional paid-capital	Accumulated deficit	Total stockholders' equity
	Shares	Amount			
<b>Balance at December 31, 2017</b>	<b>13,553,873</b>	<b>\$13,554</b>	<b>\$138,916,900</b>	<b>\$ (77,980,866)</b>	<b>\$ 60,949,588</b>
Issuance of restricted stock	7,500	7	(7)	—	—
Stock-based compensation expense	—	—	1,687,024	—	1,687,024
Net loss	—	—	—	(12,306,334)	(12,306,334)
<b>Balance at March 31, 2018</b>	<b>13,561,373</b>	<b>\$13,561</b>	<b>\$140,603,917</b>	<b>\$ (90,287,200)</b>	<b>\$ 50,330,278</b>

See accompanying notes to unaudited consolidated financial statements.

**ZYNERBA PHARMACEUTICALS, INC.  
CONSOLIDATED STATEMENTS OF CASH FLOWS  
(UNAUDITED)**

	<b>Three months ended March 31,</b>	
	<b>2018</b>	<b>2017</b>
Cash flows from operating activities:		
Net loss	\$ (12,306,334)	\$ (7,259,021)
Adjustments to reconcile net loss to net cash used in operating activities:		
Depreciation	26,566	20,419
Stock-based compensation	1,687,024	1,188,699
Changes in operating assets and liabilities:		
Incentive and tax receivables	(1,179,899)	(1,395,401)
Prepaid expenses and other assets	(55,296)	(172,008)
Accounts payable	1,250,595	(851,218)
Accrued expenses	216,038	818,962
Net cash used in operating activities	<u>(10,361,306)</u>	<u>(7,649,568)</u>
Cash flows from investing activities:		
Purchases of property and equipment	<u>(17,373)</u>	<u>(68,613)</u>
Net cash used in investing activities	<u>(17,373)</u>	<u>(68,613)</u>
Cash flows from financing activities:		
Proceeds from the issuance of common stock, net of offering costs	<u>—</u>	<u>54,245,579</u>
Net cash provided by financing activities	<u>—</u>	<u>54,245,579</u>
Net (decrease) increase in cash and cash equivalents	<u>(10,378,679)</u>	<u>46,527,398</u>
Cash and cash equivalents at beginning of period	<u>62,510,277</u>	<u>30,965,791</u>
Cash and cash equivalents at end of period	<u>\$ 52,131,598</u>	<u>\$ 77,493,189</u>
Supplemental disclosures of cash flow information:		
Changes in property and equipment acquired but not paid	\$ —	\$ 6,621

See accompanying notes to unaudited consolidated financial statements

**ZYNERBA PHARMACEUTICALS, INC.  
NOTES TO UNAUDITED CONSOLIDATED FINANCIAL STATEMENTS**

**(1) Nature of Business and Liquidity**

Zynerba Pharmaceuticals, Inc., together with its subsidiary, Zynerba Pharmaceuticals Pty Ltd (the “Company” or “we”), is a clinical stage specialty neuropsychiatric pharmaceutical company dedicated to developing and commercializing innovative pharmaceutically-produced transdermal cannabinoid treatments for rare and near-rare neurological and psychiatric disorders in patients with high unmet medical needs. The Company was incorporated on January 31, 2007 under the laws of the State of Delaware as AllTranz, Inc. and changed its name to Zynerba Pharmaceuticals, Inc. in August 2014.

The Company has incurred losses and negative cash flows from operations since inception and has an accumulated deficit of \$90.3 million as of March 31, 2018. The Company anticipates incurring additional losses until such time, if ever, that it can generate significant revenue from its product candidates currently in development. The Company's primary source of liquidity has been the issuance of equity securities.

In the first quarter of 2017, the Company completed a follow-on public offering, selling 3,220,000 shares at an offering price of \$18.00 per share resulting in gross proceeds of \$58.0 million. Net proceeds received after deducting underwriting and commissions and offering expenses were \$54.2 million.

In June 2017, the Company entered into the Open Market Sales Agreement (the “Sales Agreement”) with Jefferies LLC, (“Jefferies”) pursuant to which the Company may sell, from time to time, up to \$50.0 million of its common stock. During 2017, the Company sold and issued 296,594 shares of common stock in the open market at a weighted average selling price of \$10.74 per share, for gross proceeds of \$3.2 million. Net proceeds after deducting underwriting and commissions and offering expenses were \$3.0 million. No shares were sold under the Sales Agreement during the three months ended March 31, 2018.

Management believes that the cash and cash equivalents position as of March 31, 2018 is sufficient to fund operations and capital requirements well into 2019. Substantial additional financings will be needed by the Company to fund its operations, to complete clinical development of and to commercially develop its product candidates. There is no assurance that such financing will be available when needed or on acceptable terms.

The Company is subject to those risks associated with any clinical stage pharmaceutical company that has substantial expenditures for research and development. There can be no assurance that the Company's research and development projects will be successful, that products developed will obtain necessary regulatory approval, or that any approved product will be commercially viable. In addition, the Company operates in an environment of rapid technological change and is largely dependent on the services of its employees and consultants.

**(2) Summary of Significant Accounting Policies**

**a. Basis of Presentation**

The accompanying unaudited interim consolidated financial statements of the Company have been prepared in accordance with U.S. generally accepted accounting principles (“GAAP”) for interim financial information and with the instructions to Form 10-Q and Article 10 of Regulation S-X. The interim unaudited consolidated financial statements have been prepared on the same basis as the consolidated financial statements as of and for the year ended December 31, 2017 included in the Company's Annual Report on Form 10-K for the year ended December 31, 2017 (“2017 Annual Report”), filed with the Securities and Exchange Commission (“SEC”). In the opinion of management, the accompanying consolidated financial statements of the Company include all normal and recurring adjustments (which consist primarily of accruals, estimates and assumptions that impact the financial statements) considered necessary to present fairly the Company's financial position as of March 31, 2018 and its results of operations and cash flows for the three months ended March 31, 2018 and 2017. Operating results for any interim period are not necessarily indicative of results for any future interim period or for the entire year. The accompanying unaudited interim consolidated financial statements should be read in conjunction with the consolidated financial statements and related notes included in the Company's 2017 Annual Report.



**ZYNERBA PHARMACEUTICALS, INC.  
NOTES TO UNAUDITED CONSOLIDATED FINANCIAL STATEMENTS (Continued)**

b. Use of Estimates

The preparation of financial statements in conformity with GAAP requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities and disclosures of contingent assets and liabilities at the date of the financial statements and reported amounts of expenses during the reporting period. Actual results could differ from such estimates.

c. Incentive and Tax Receivables

The Company's subsidiary, Zynerva Pharmaceuticals Pty Ltd (the "Subsidiary"), is incorporated in Australia. The Subsidiary is eligible to participate in an Australian research and development tax incentive program. As part of this program, the Subsidiary is eligible to receive a cash refund from the Australian Taxation Office for a percentage of the research and development costs expended by the Subsidiary in Australia. The cash refund is available to eligible companies with an annual aggregate revenue of less than \$20.0 million (Australian) during the reimbursable period. The Company's estimate of the amount of cash refund it expects to receive related to the Australian research and development tax incentive program is included in "Incentive and tax receivables" in the accompanying consolidated balance sheets. As of March 31, 2018, the Company's estimate of the amount of cash refund it expects to receive in 2018 for 2017 eligible spending as part of this incentive program was \$3.7 million and was recorded as a current asset. The Company's estimate of the amount of cash refund it expects to receive in 2019 for 2018 eligible spending through March 31, 2018 was \$1.1 million and was recorded as a non-current asset.

In addition, the Subsidiary incurs Goods and Services Tax ("GST") on services provided by Australian vendors. As an Australian entity, the Subsidiary is entitled to a refund of the GST paid. The Company's estimate of the amount of cash refund it expects to receive related to GST incurred is included in "Incentive and tax receivables" in the accompanying consolidated balance sheets. As of March 31, 2018, incentive and tax receivables included \$0.3 million for refundable GST on expenses incurred with Australian vendors during the three months ended March 31, 2018.

d. Research and Development

Research and development costs are expensed as incurred and are primarily comprised of external research and development expenses incurred under arrangements with third parties, such as contract research organizations ("CROs"), contract manufacturing organizations ("CMO's"), consultants and employee-related expenses including salaries and benefits. At the end of each reporting period, the Company compares the payments made to each service provider to the estimated progress towards completion of the related project. Factors that the Company considers in preparing these estimates include the number of patients enrolled in studies, milestones achieved and other criteria related to the efforts of its vendors. These estimates will be subject to change as additional information becomes available. Depending on the timing of payments to vendors and estimated services provided, the Company will record net prepaid or accrued expenses related to these costs. Research and development expenses are recorded net of expected refunds of eligible research and development costs paid to Australian vendors pursuant to the Australian research and development tax incentive program and GST incurred on services provided by Australian vendors.

e. Net Loss Per Share

Basic net loss per share is determined using the weighted average number of shares of common stock outstanding during each period. Diluted net income per share includes the effect, if any, from the potential exercise or conversion of securities, such as restricted stock and stock options, which would result in the issuance of incremental shares of common stock. Basic and dilutive computations of net loss per share are the same in periods in which a net loss exists as the dilutive effects of restricted stock and stock options would be anti-dilutive.

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**ZYNERBA PHARMACEUTICALS, INC.**  
**NOTES TO UNAUDITED CONSOLIDATED FINANCIAL STATEMENTS (Continued)**

The following potentially dilutive securities outstanding as of March 31, 2018 and 2017 have been excluded from the computation of diluted weighted average shares outstanding, as their effects on net loss per share for the periods presented would be anti-dilutive:

	March 31,	
	2018	2017
Stock options	3,043,908	2,232,843
Unvested restricted stock	79,987	217,459
	<u>3,123,895</u>	<u>2,450,302</u>

f. Recent Accounting Pronouncements

In February 2016, the Financial Accounting Standards Board (“FASB”) issued Accounting Standards Update (“ASU”) No. 2016-02, *Leases*, which requires that lease arrangements longer than 12 months result in an entity recognizing an asset and liability. The pronouncement is effective for interim and annual periods beginning after December 15, 2018 with early adoption permitted. The adoption of this guidance is not expected to have a material impact on the Company’s consolidated financial statements.

In August 2016, the FASB issued ASU No. 2016-15, *Classification of Certain Cash Receipts and Cash Payments*, which provides specific guidance related to eight cash flow classification issues. The pronouncement is effective for interim and annual periods beginning after December 15, 2017. The adoption of the guidance in ASU No. 2016-15 in the first quarter of 2018 did not have an impact on the Company’s consolidated financial statements.

In November 2016, the FASB issued ASU No. 2016-18, *Restricted Cash*, which requires changes in restricted cash and restricted cash equivalents to be explained on the statement of cash flows by including restricted cash and restricted cash equivalents in the beginning-of-period and end-of-period total cash and cash equivalents shown on the statement of cash flows. The pronouncement is effective for interim and annual periods beginning after December 15, 2017. The adoption of the guidance in ASU No. 2016-18 in the first quarter of 2018 did not have an impact on the Company’s consolidated financial statements.

**(3) Fair Value Measurements**

The Company measures certain assets and liabilities at fair value in accordance with Accounting Standards Codification (“ASC”) 820, *Fair Value Measurements and Disclosures*. ASC 820 defines fair value as the price that would be received to sell an asset or paid to transfer a liability (the exit price) in an orderly transaction between market participants at the measurement date. The guidance in ASC 820 outlines a valuation framework and creates a fair value hierarchy that serves to increase the consistency and comparability of fair value measurements and the related disclosures. In determining fair value, the Company maximizes the use of quoted prices and observable inputs. Observable inputs are inputs that market participants would use in pricing the asset or liability based on market data obtained from independent sources. The fair value hierarchy is broken down into three levels based on the source of inputs as follows:

Level 1 — Valuations based on unadjusted quoted prices in active markets for identical assets or liabilities.

Level 2 — Valuations based on observable inputs and quoted prices in active markets for similar assets and liabilities.

Level 3 — Valuations based on unobservable inputs and models that are supported by little or no market activity.

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**ZYNERBA PHARMACEUTICALS, INC.**  
**NOTES TO UNAUDITED CONSOLIDATED FINANCIAL STATEMENTS (Continued)**

The following fair value hierarchy tables present information about each major category of financial assets measured at fair value on a recurring basis as of March 31, 2018 and December 31, 2017:

	Carrying amount as of March 31, 2018	Fair Value Measurement as of March 31, 2018		
		Level 1	Level 2	Level 3
Cash equivalents (money market accounts)	\$ 51,301,969	\$ 51,301,969	\$ —	\$ —
Certificate of deposit (included in prepaid expenses and other current assets)	20,016	20,016	—	—
	<u>\$ 51,321,985</u>	<u>\$ 51,321,985</u>	<u>\$ —</u>	<u>\$ —</u>

	Carrying amount as of December 31, 2017	Fair Value Measurement as of December 31, 2017		
		Level 1	Level 2	Level 3
Cash equivalents (money market accounts)	\$ 61,133,457	\$ 61,133,457	\$ —	\$ —
Certificate of deposit (included in prepaid expenses and other current assets)	20,171	20,171	—	—
	<u>\$ 61,153,628</u>	<u>\$ 61,153,628</u>	<u>\$ —</u>	<u>\$ —</u>

**(4) Prepaid Expenses and Other Current Assets**

Prepaid expenses and other current assets consisted of the following as of March 31, 2018 and December 31, 2017:

	March 31, 2018	December 31, 2017
Prepaid development expenses	\$ 1,094,395	\$ 907,028
Prepaid insurance	179,770	355,838
Deferred financing costs	225,439	240,439
Other current assets	289,393	230,396
Total prepaid expenses and other current assets	<u>\$ 1,788,997</u>	<u>\$ 1,733,701</u>

**(5) Property and Equipment**

Property and equipment consisted of the following as of March 31, 2018 and December 31, 2017:

	Estimated useful life (in years)	March 31, 2018	December 31, 2017
Equipment	2-5	\$ 85,417	\$ 85,417
Computer equipment	3-5	30,319	30,319
Furniture and fixtures	3-5	216,389	199,016
Leasehold improvements	various	12,863	12,863
Total cost		344,988	327,615
Less accumulated depreciation		(189,654)	(163,088)
Property and equipment, net		<u>\$ 155,334</u>	<u>\$ 164,527</u>

Depreciation expense was \$26,566 and \$20,419 for the three months ended March 31, 2018 and 2017, respectively.

**ZYNERBA PHARMACEUTICALS, INC.  
NOTES TO UNAUDITED CONSOLIDATED FINANCIAL STATEMENTS (Continued)****(6) Accrued Expenses**

Accrued expenses consisted of the following as of March 31, 2018 and December 31, 2017:

	March 31, 2018	December 31, 2017
Accrued compensation	\$ 685,969	\$ 1,503,615
Accrued research and development	2,980,029	2,059,536
Other	465,531	352,340
Total accrued expenses	<u>\$ 4,131,529</u>	<u>\$ 3,915,491</u>

**(7) Common Stock**

In the first quarter of 2017, the Company completed a follow-on public offering, selling 3,220,000 shares at an offering price of \$18.00 per share resulting in gross proceeds of \$58.0 million. Net proceeds received after deducting underwriting and commissions and offering expenses were \$54.2 million.

In June 2017, the Company entered into the Sales Agreement with Jefferies pursuant to which the Company may sell, from time to time, up to \$50.0 million of its common stock. As of March 31, 2018, cumulative shares sold in the open market under the Sales Agreement were 296,594 shares, resulting in gross proceeds of \$3.2 million. No shares were sold under the Sales Agreement during the three months ended March 31, 2018.

**(8) Stock-Based Compensation**

The Company maintains the Amended and Restated 2014 Omnibus Incentive Compensation Plan, as amended (the "2014 Plan"), which allows for the granting of incentive stock options, nonqualified stock options, stock appreciation rights, stock awards, stock units, performance units and other stock-based awards to employees, officers, non-employee directors, consultants, and advisors. In addition, the 2014 Plan provides selected executive employees with the opportunity to receive bonus awards that are considered qualified performance-based compensation. Beginning on January 1, 2017, the 2014 Plan is subject to automatic annual increases in the number of shares authorized for issuance under the 2014 Plan on the first trading day of January each year equal to the lesser of 1.5 million shares or 10% of the number of shares of common stock outstanding on the last trading day of December of the preceding year. As of January 1, 2018, the number of shares of common stock that may be issued under the 2014 Plan was automatically increased by 1,355,387 shares, increasing the number of shares of common stock available for issuance under the 2014 Plan to 4,804,869 shares. As of March 31, 2018, 1,265,168 shares are available for issuance under the 2014 Plan.

Options issued under the 2014 Plan have a contractual life of 10 years and may be exercisable in cash or as otherwise determined by the board of directors. The Company has granted options to employees and non-employee directors. Stock options granted to employees vest 25% upon the first anniversary of the grant date and the balance of unvested options vests in quarterly installments over a three year period. Stock options granted annually to non-employee directors vest on the earlier of the one-year anniversary of the grant date, or the date of the Company's next annual stockholders' meeting that occurs after the grant date. Effective April 1, 2017, the Company revised its non-employee director compensation policy to enable directors to receive stock options in lieu of quarterly cash payments. Any option granted to the directors in lieu of cash compensation vests in full on the date of grant.

The Company granted 83,280 performance-based stock options to certain employees in January 2018. These performance options have a 10-year life and an exercise price equal to the fair value of the Company's stock at the grant date. Vesting of these performance options is dependent on meeting certain performance conditions, which relate to the Company's research and development progress, which were established by the Company's board of directors. The Company's board of directors determines if the performance conditions have been met. Stock-based compensation expense for these options is recorded when management estimates that the vesting of these options is probable based on the status of the Company's research and development programs and other relevant factors. For the three months ended March 31, 2018, none of the performance-based metrics were deemed probable. Any change in these estimates will result in a cumulative adjustment in the period in which the estimate is changed, so that as of the end of a period, the

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**ZYNERBA PHARMACEUTICALS, INC.**  
**NOTES TO UNAUDITED CONSOLIDATED FINANCIAL STATEMENTS (Continued)**

cumulative compensation expense recognized for an award or grant equals the amount that would be recognized on a straight-line basis as if the current estimates had been utilized since the beginning of the service period. The aggregate estimated grant date fair value of options for which the satisfaction of the related-performance conditions have not been deemed probable is \$663,484.

For the three months ended March 31, 2018 and 2017, the Company recorded stock-based compensation expense related to its stock option grants and restricted stock awards, as follows:

	<u>Stock Option Grants</u>		<u>Restricted stock awards</u>		<u>Total</u>	
	<u>Three Months Ended March 31,</u>		<u>Three Months Ended March 31,</u>		<u>Three Months Ended March 31,</u>	
	<u>2018</u>	<u>2017</u>	<u>2018</u>	<u>2017</u>	<u>2018</u>	<u>2017</u>
Research and development	\$ 683,804	\$ 502,475	\$ 64,440	\$ 39,370	\$ 748,244	\$ 541,845
General and administrative	918,923	626,264	19,857	20,590	938,780	646,854
	<u>\$ 1,602,727</u>	<u>\$ 1,128,739</u>	<u>\$ 84,297</u>	<u>\$ 59,960</u>	<u>\$ 1,687,024</u>	<u>\$ 1,188,699</u>

The following table summarizes the stock option activity for the three months ended March 31, 2018:

	<u>Number</u>	<u>Weighted-Average Exercise Price</u>	<u>Weighted-Average Contractual Life (in Years)</u>	<u>Aggregate Intrinsic Value</u>
	<u>of Shares</u>	<u>Price</u>		<u>Value</u>
Outstanding as of December 31, 2017	2,386,538	\$ 12.53		
Granted	657,370	\$ 11.75		
Outstanding as of March 31, 2018	<u>3,043,908</u>	<u>\$ 12.36</u>	<u>8.15</u>	<u>\$ 2,626,511</u>
Exercisable as of March 31, 2018	<u>1,375,035</u>	<u>\$ 10.37</u>	<u>7.32</u>	<u>\$ 2,307,087</u>
Vested and expected to vest as of March 31, 2018	<u>3,043,908</u>	<u>\$ 12.36</u>		

The weighted-average grant date fair value of options granted during the three months ended March 31, 2018 and 2017 was \$8.15 and \$12.86, respectively. During the three months ended March 31, 2018, stock option grants included 1,470 stock options that were granted to certain members of the Company's board of directors, at their election, in lieu of quarterly cash payments.

The fair values of stock options granted were calculated using the Black-Scholes option pricing model with the following weighted-average assumptions:

	<u>Three months ended March 31,</u>	
	<u>2018</u>	<u>2017</u>
Weighted-average risk-free interest rate	2.43%	2.19%
Expected term of options (in years)	6.20	6.25
Expected stock price volatility	78.00%	77.00%
Expected dividend yield	0%	0%

As of March 31, 2018, excluding performance-based stock options that have not been deemed probable, there was \$13.0 million of unrecognized stock-based compensation expense related to stock options, which is expected to be recognized over a weighted-average period of 2.82 years. Performance-based stock options not deemed probable have an unrecognized stock-based compensation expense of \$0.7 million as of March 31, 2018.

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**ZYNERBA PHARMACEUTICALS, INC.**  
**NOTES TO UNAUDITED CONSOLIDATED FINANCIAL STATEMENTS (Continued)**

The following table summarizes the restricted stock award activity under the 2014 Plan for the three months ended March 31, 2018:

	<u>Shares</u>	<u>Weighted Average Grant Date Fair Value</u>
Unvested as of December 31, 2017	108,730	\$ 1.65
Granted	7,500	12.99
Vested	<u>(36,243)</u>	<u>1.65</u>
Unvested as of March 31, 2018	<u>79,987</u>	<u>\$ 2.72</u>

As of March 31, 2018, there was \$0.2 million of unrecognized stock-based compensation expense related to unvested restricted stock awards, which is expected to be recognized over a weighted-average period of 0.54 years. The Company expects all 79,987 unvested restricted stock awards to vest.

**(9) Defined Contribution Retirement Plan**

The Company offers a tax-qualified defined contribution retirement plan, which we refer to as our 401(k) plan, to eligible employees, including our current named executive officers. Our 401(k) plan permits eligible employees to defer their annual eligible compensation subject to the limitations imposed by the Internal Revenue Service. The Company may, but is not required to, make discretionary employer matching contributions on behalf of eligible employees under this plan. On January 1, 2018, the Company commenced making an employer match of 33% for the first 6% of employee contributions. Employer matching contributions vest immediately. During the three months ended March 31, 2018, the expense recorded for the Company's contributions to the plan was \$21,116, and no contributions were made during the three months ended March 31, 2017.

## **Item 2. Management's Discussion and Analysis of Financial Condition and Results of Operations**

*You should read the following discussion and analysis of our financial condition and results of operations together with our unaudited interim consolidated financial statements and related notes appearing elsewhere in this Quarterly Report and the audited consolidated financial statements and notes thereto for the year ended December 31, 2017 and the related Management's Discussion and Analysis of Financial Condition and Results of Operations, both of which are contained in our 2017 Annual Report. The following discussion contains forward-looking statements that involve risks, uncertainties and assumptions. Our actual results and the timing of certain events could differ materially from those anticipated in these forward-looking statements as a result of many factors. We discuss factors that we believe could cause or contribute to these differences below and elsewhere in this Quarterly Report, including those set forth under "Cautionary Note Regarding Forward-looking Statements" and "Risk Factors" in this Quarterly Report and our 2017 Annual Report.*

### **Overview**

#### **Company Overview**

We are a clinical stage specialty pharmaceutical company dedicated to the development and commercialization of innovative transdermal pharmaceutically-produced cannabinoid treatments for rare (meeting the U.S. Food and Drug Administration's, or FDA's, designation of an orphan disease, affecting fewer than 200,000 people in the United States) and near-rare (affecting fewer than one million people in the United States) neurological and psychiatric, or neuropsychiatric, disorders in patients with high unmet medical needs. We are currently evaluating two patent protected product candidates, ZYN002 and ZYN001, in four neuropsychiatric indications. In 2017, we completed three Phase 2 clinical trials for ZYN002 and two of those studies have open-label extensions that are ongoing. In April 2018, we initiated a Phase 2 clinical trial evaluating ZYN002 in Developmental and Epileptic Encephalopathies, or DEE, in pediatric and adolescent patients. In 2018 we also plan to initiate additional clinical trials evaluating ZYN002 for the treatment of behavioral symptoms of Fragile X syndrome, or FXS, in pediatric and adolescent patients, and refractory focal seizures in adults with epilepsy. We intend to study ZYN001 in patients with Tourette Syndrome, or TS, and anticipate initiating a Phase 2 clinical trial in late 2018. We believe these product candidates will provide new treatment options for patients.

Cannabinoids are a class of compounds derived from *Cannabis* plants. The two primary cannabinoids contained in *Cannabis* are cannabidiol, or CBD, and  $\Delta^9$ -tetrahydrocannabinol, or THC. Clinical and preclinical data suggest that CBD has positive effects on treating behavioral symptoms of FXS and epilepsy, and THC may have positive effects on treating TS. We believe ZYN002 may potentially offer first-line therapies to patients suffering from FXS, DEE and focal seizures in adults with epilepsy, and ZYN001 may potentially offer first-line therapies to patients suffering from TS.

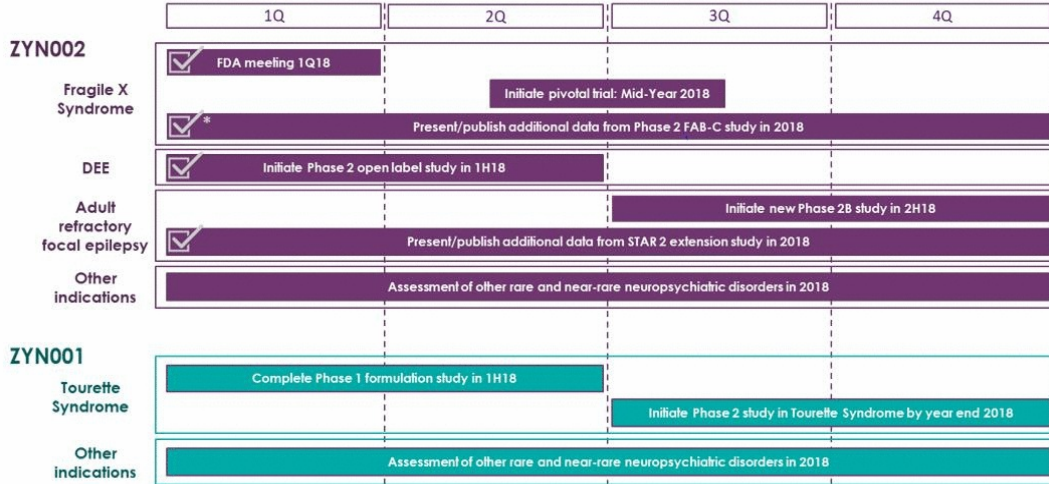
ZYN002 is the first and only pharmaceutically-produced CBD formulated as a permeation-enhanced gel for transdermal delivery, and is patent protected through 2030. CBD is the primary non-psychoactive component of *Cannabis*. In preclinical animal studies, ZYN002's permeation enhancer increased delivery of CBD through the layers of the skin and into the circulatory system. These preclinical studies suggest increased bioavailability, consistent plasma levels and the avoidance of first-pass liver metabolism of CBD when delivered transdermally. In addition, an *in vitro* study published in *Cannabis and Cannabinoid Research* in April 2016 demonstrated that CBD is degraded to THC in an acidic environment such as the stomach. We believe such degradation may lead to increased psychoactive effects if CBD is delivered orally and may be avoided with the transdermal delivery of ZYN002, which maintains CBD in a neutral pH. ZYN002, which is being developed as a clear gel with once- or twice-daily dosing, is targeting treatment of behavioral symptoms of FXS and DEE in pediatric and adolescent patients and refractory focal seizures in adults with epilepsy. We have been granted orphan drug designation from the FDA for the use of CBD for the treatment of FXS. In our Phase 1 program, ZYN002 was demonstrated to be safe and well tolerated, provided a favorable CBD pharmacokinetic profile, and no THC was detected in plasma or urine.

ZYN001 is a pro-drug of THC that is designed to enable effective transdermal delivery of THC via a patch and is patent protected through 2031. A pro-drug is a drug administered in an inactive or less active form and designed to enable more effective delivery, which is then converted into an active form through a normal enzymatic process. In addition, we expect that ZYN001 will be classified by the FDA as a new chemical entity. We are working with a development partner, LTS LOHMANN Therapie-Systeme AG, to optimize the formulation of ZYN001 into a state of the art drug-adhesive matrix transdermal patch to be used in clinical studies.

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In our preclinical animal studies, ZYN001 demonstrated effective skin permeation with sustained delivery and rapid conversion of ZYN001 to THC. These preclinical studies suggest increased bioavailability, consistent plasma levels and the avoidance of first-pass liver metabolism of ZYN001. In addition, preclinical testing has shown no genotoxicity findings and safety pharmacology findings consistent with those seen with THC. ZYN001 is targeting treatment of TS. We initiated Phase 1 clinical trials for ZYN001 in June 2017 and results from this study are expected in the first half of 2018. These data will inform the planned Phase 2 program for ZYN001, now expected to initiate in late 2018.

Our key development programs and expected timelines for the development of ZYN002 and ZYN001 are shown in the chart below:



\* Accepted for presentation at Int'l NFXF Conference; Cincinnati, OH, July 11-15, 2018

We have never been profitable and have incurred net losses since inception. Our net losses were \$12.3 million and \$7.3 million for the three months ended March 31, 2018 and 2017, respectively. As of March 31, 2018, our accumulated deficit was \$90.3 million. We expect to incur losses for the foreseeable future, and we expect these losses to increase as we continue our development of, and seek regulatory approvals for, our product candidates. Because of the numerous risks and uncertainties associated with product development, we are unable to predict the timing or amount of increased expenses or when, or if, we will be able to achieve or maintain profitability.

**Financial Operations Overview**

The following discussion sets forth certain components of our consolidated statements of operations as well as factors that impact those items.

*Revenue*

Historically, our revenue consisted of state and federal research grants and fees received from research services for third-party product development. We recognize revenue when persuasive evidence of an arrangement exists, delivery has occurred or services have been rendered, the price is fixed or determinable and collectability is reasonably assured.

*Research and Development Expenses*

Our research and development expenses relating to our product candidates consist of the following:

- expenses associated with preclinical development and clinical trials;



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- personnel-related expenses, such as salaries, benefits, travel and other related expenses, including stock-based compensation;
- payments to third-party CROs, CMO's, contractor laboratories and independent contractors; and
- depreciation, maintenance and other facility-related expenses.

We expense all research and development costs as incurred. Clinical development expenses for our product candidates are a significant component of our current research and development expenses. Expenses associated with clinical trials will increase as our clinical trials progress. Product candidates in later stage clinical development generally have higher research and development expenses than those in earlier stages of development, primarily due to increased size and duration of the clinical trials. We track and record information regarding external research and development expenses for each grant, study or trial that we conduct. We use third-party CROs, CMO's, contractor laboratories and independent contractors in preclinical studies and clinical trials. We recognize the expenses associated with third parties performing these services for us in our preclinical studies and clinical trials based on the percentage of each study completed at the end of each reporting period.

For the three months ended March 31, 2018 and 2017, we recognized research and development expenses of \$9.0 million and \$5.5 million, respectively, which were net of \$1.1 million and \$1.1 million, respectively, associated with the Australian research and development tax incentive program. As part of this program, we are eligible to receive a cash refund from the Australian Taxation Office for a percentage of our research and development costs expended by Zynerva Pharmaceuticals Pty Ltd., our Australian subsidiary.

We expect research and development expenses in future years to continue to increase as we continue our clinical trials and begin new phases for each of our product candidates. These expenditures are subject to numerous uncertainties regarding timing and cost to completion. Completion of our preclinical development and clinical trials may take several years or more and the length of time generally varies according to the type, complexity, novelty and intended use of a product candidate. The cost of clinical trials may vary significantly over the life of a project as a result of differences arising during clinical development, including, among others:

- the number of sites included in the clinical trials;
- the length of time required to enroll suitable patients;
- the size of patient populations participating in the clinical trials;
- the duration of patient follow-ups;
- the development stage of the product candidates; and
- the efficacy and safety profile of the product candidates.

Due to the early stages of our research and development, we are unable to determine the duration or completion costs of our development of ZYN002 and ZYN001. As a result of the difficulties of forecasting research and development costs of ZYN002 and ZYN001 as well as the other uncertainties discussed above, we are unable to determine when and to what extent we will generate revenue from the commercialization and sale of an approved product candidate.

### *General and Administrative Expenses*

General and administrative expenses consist primarily of salaries, benefits and other related costs, including stock-based compensation, for personnel serving in our executive, finance, legal, human resource, investor relations and commercial functions. Our general and administrative expenses also include facility and related costs not included in research and development expenses, professional fees for legal services, including patent-related expenses, consulting, tax and accounting services, insurance, market research and general corporate expenses. We expect that our general and administrative expenses will increase for the next several years as we increase our headcount with the continued development and potential commercialization of our product candidates.

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*Interest Income*

Interest income primarily consists of interest earned on balances maintained in our money market bank account.

*Foreign Exchange (Loss) Gain*

Foreign exchange (loss) gain relates to the effect of exchange rates on transactions incurred by our Australian subsidiary.

**Critical Accounting Estimates**

Our management's discussion and analysis of our financial condition and results of operations is based on our consolidated financial statements, which have been prepared in accordance with U.S. generally accepted accounting principles, or GAAP. The preparation of these financial statements requires us to make estimates and judgments that affect the reported amounts of assets and liabilities, disclosure of contingent assets and liabilities at the date of the financial statements, and the reported amounts of revenues and expenses during the reported period. In accordance with GAAP, we base our estimates on historical experience, known trends and events and various other factors that we believe to be reasonable under the circumstances, the results of which form the basis for making judgments about the carrying amounts of assets and liabilities that are not readily apparent from other sources. Actual results may differ from these estimates under different assumptions or conditions.

We define our critical accounting policies as those that require us to make subjective estimates and judgments about matters that are uncertain and are likely to have a material impact on our financial condition and results of operations as well as the specific manner in which we apply those principles. Critical accounting estimates and the accounting policies critical to the process of making significant judgments and estimates in the preparation of our consolidated financial statements are discussed in our 2017 Annual Report under Part I, Item 7, "Critical Accounting Policies and Use of Estimates". During the three months ended March 31, 2018, there have been no material changes to the critical accounting estimates or critical accounting policies discussed in our 2017 Annual Report.

**Results of Operations**

***Comparison of the Three Months Ended March 31, 2018 and 2017***

*Research and Development Expenses*

Research and development expenses increased by \$3.5 million, or 63%, to \$9.0 million for the three months ended March 31, 2018 from \$5.5 million for the three months ended March 31, 2017. The increase was primarily related to costs for active pharmaceutical ingredients and drug product for ZYN002 and ZYN001; phase I studies evaluating alternative dosing sites and concentrations of ZYN002; and personnel costs, including recruiting and stock-based compensation expense. These increases were partially offset by lower clinical trial costs for ZYN002.

*General and Administrative Expenses*

General and administrative expenses increased by \$1.2 million, or 55%, to \$3.4 million for the three months ended March 31, 2018 from \$2.2 million for the three months ended March 31, 2017. The increase was primarily related to increases in expenses associated with personnel costs, including recruiting and stock-based compensation expense, and the development of our commercialization plans for our product candidates, if approved.

*Other Income (Expense)*

During the three months ended March 31, 2018 and 2017, we recognized \$0.2 million and \$0.1 million, respectively, in interest income. The increase in interest income was primarily related to an increase in the average interest rate earned on our investments. During the three months ended March 31, 2018 and 2017, we recognized a foreign currency loss of \$0.1 million and a foreign currency gain of \$0.4 million, respectively. Foreign currency gains and losses are due primarily to the remeasurement of our Australian subsidiary's assets and liabilities that are denominated in the local currency to the subsidiary's functional currency, which is the U.S. dollar.

## **Liquidity and Capital Resources**

Since our inception in 2007, we have devoted most of our cash resources to research and development and general and administrative activities. We have financed our operations primarily with the proceeds from the sale of equity securities (most notably our IPO in 2015, sales under our “at-the-market” offering in 2016 and 2017, and our follow-on public offering in the first quarter of 2017, which are described below under Equity Financings) and convertible promissory notes, state and federal grants and research services.

To date, we have not generated any revenue from the sale of products, and we do not anticipate generating any revenue from the sales of products for the foreseeable future. We have incurred losses and generated negative cash flows from operations since inception. As of March 31, 2018, our principal source of liquidity was our cash and cash equivalents, which totaled \$52.1 million. Our working capital was \$49.1 million as of March 31, 2018.

Management believes that the cash and cash equivalents position as of March 31, 2018 is sufficient to fund operations and capital requirements well into 2019. Substantial additional financings will be needed to fund our operations and to complete clinical development of and to commercially develop our product candidates. There is no assurance that such financing will be available when needed or on acceptable terms.

### *Equity Financings*

In the first quarter of 2017, we completed a follow-on public offering, selling 3,220,000 shares of our common stock at an offering price of \$18.00 per share, resulting in gross proceeds of \$58.0 million. Net proceeds received after deducting underwriting and commissions and offering expenses were \$54.2 million.

In June 2017, we entered into an Open Market Sales Agreement, or Sales Agreement, with Jefferies LLC, or Jefferies, pursuant to which we may sell, from time to time, up to \$50 million of our common stock. During 2017, we sold and issued 296,594 shares of common stock in the open market at a weighted average selling price of \$10.74 per share, for gross proceeds of \$3.2 million. Net proceeds after deducting underwriting and commissions and offering expenses were \$3.0 million. No shares were sold under the Sales Agreement during the three months ended March 31, 2018.

### *Debt*

We had no debt outstanding as of March 31, 2018 or December 31, 2017.

### *Future Capital Requirements*

During the three months ended March 31, 2018, net cash used in operating activities was \$10.4 million, and our accumulated deficit as of March 31, 2018 was \$90.3 million. Our expectations regarding future cash requirements do not reflect the potential impact of any future acquisitions, mergers, dispositions, joint ventures or investments that we may make in the future. To the extent that we enter into any of those types of transactions, we may need to raise substantial additional capital.

We expect to continue to incur substantial additional operating losses for at least the next several years as we continue to develop our product candidates and seek marketing approval and, subject to obtaining such approval, the eventual commercialization of our product candidates. If we obtain marketing approval for either of our product candidates, we will incur significant sales, marketing and manufacturing expenses. In addition, we expect to incur additional expenses to add operational, financial and information systems and personnel, including personnel to support our planned product commercialization efforts. We also expect to incur significant costs to comply with corporate governance, internal controls and similar requirements associated with operating as a public reporting company.

Our future use of operating cash and capital requirements will depend on many forward-looking factors, including the following:

- the initiation, progress, timing, costs and results of preclinical studies and clinical trials for our product candidates;
- the clinical development plans we establish for these product candidates;

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- the number and characteristics of product candidates that we develop or may in-license;
- the terms of any collaboration agreements we may choose to execute;
- the outcome, timing and cost of meeting regulatory requirements established by the United States Drug Enforcement Agency, the FDA, the European Medicines Agency or other comparable foreign regulatory authorities;
- the cost of filing, prosecuting, defending and enforcing our patent claims and other intellectual property rights;
- the cost of defending intellectual property disputes, including patent infringement actions brought by third parties against us;
- costs and timing of the implementation of commercial scale manufacturing activities; and
- the cost of establishing, or outsourcing, sales, marketing and distribution capabilities for any product candidates for which we may receive regulatory approval in regions where we choose to commercialize our products on our own.

To the extent that our capital resources are insufficient to meet our future operating and capital requirements, we will need to finance our cash needs through public or private equity offerings, debt financings, collaboration and licensing arrangements or other financing alternatives. We have no committed external sources of funds. Additional equity or debt financing or collaboration and licensing arrangements may not be available on acceptable terms, if at all.

If we raise additional funds by issuing equity securities, our stockholders will experience dilution.

### *Cash Flows*

The following table summarizes our cash flows from operating, investing and financing activities for the three months ended March 31, 2018 and 2017.

	<u>Three Months Ended March 31,</u>	
	<u>2018</u>	<u>2017</u>
<b>Statement of Cash Flows Data:</b>		
Total net cash (used in) provided by:		
Operating activities	<u>\$(10,361,306)</u>	<u>\$ (7,649,568)</u>
Investing activities	<u>(17,373)</u>	<u>(68,613)</u>
Financing activities	<u>—</u>	<u>54,245,579</u>
Net (decrease) increase in cash and cash equivalents	<u>\$(10,378,679)</u>	<u>\$46,527,398</u>

### *Operating Activities*

For the three months ended March 31, 2018, cash used in operating activities was \$10.4 million compared to \$7.6 million for the three months ended March 31, 2017. The increase from the comparable 2017 period was primarily the result of increased research and development activities related to the non-clinical studies and clinical trials of ZYN002 and ZYN001, as well as an increase in the number of employees hired to support our research and development and general and administrative activities.

We expect cash used in operating activities to continue to increase throughout the remainder of 2018 as compared to 2017 due to an expected increase in our operating losses associated with ongoing development of our product candidates.

### *Investing Activities*

For the three months ended March 31, 2018 and 2017 cash used in investing activities primarily represented the cost of computer equipment and furniture and fixtures associated with our corporate headquarters.

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### *Financing Activities*

Cash provided by financing activities for the three months ended March 31, 2017 consisted of \$54.2 million in proceeds from sales of our shares of common stock under a follow-on public offering.

### **Contractual Obligations**

Our material contractual obligations consist of commitments under operating lease agreements and the related amounts of our obligations as of December 31, 2017 were disclosed in "Contractual Obligations" in Part I, Item 7 in our 2017 Annual Report. Since December 31, 2017, no material changes in our contractual obligations have occurred.

### **Off-Balance Sheet Arrangements**

We do not have any off-balance sheet arrangements, except for operating leases, or relationships with unconsolidated entities or financial partnerships, such as entities often referred to as structured finance or special purpose entities.

### **Recent Accounting Pronouncements**

In February 2016, the Financial Accounting Standards Board, or FASB, issued Accounting Standards Update, or ASU, No. 2016-02, *Leases*, which requires that lease arrangements longer than 12 months result in an entity recognizing an asset and a liability. The pronouncement is effective for interim and annual periods beginning after December 15, 2018 with early adoption permitted. The adoption of this guidance is not expected to have a material impact on our consolidated financial statements.

In August 2016, the FASB issued ASU No. 2016-15, *Classification of Certain Cash Receipts and Cash Payments*, which provides specific guidance related to eight cash flow classification issues. The pronouncement is effective for interim and annual periods beginning after December 15, 2017. Our adoption of the guidance in ASU No. 2016-15 in the first quarter of 2018 did not have an impact on our consolidated financial statements.

In November 2016, the FASB issued ASU No. 2016-18, *Restricted Cash*, which requires changes in restricted cash and restricted cash equivalents to be explained in the statement of cash flows by including restricted cash and restricted cash equivalents in the beginning-of-period and end-of-period total cash and cash equivalents shown on the statement of cash flows. The pronouncement is effective for interim and annual periods beginning after December 15, 2017. Our adoption of the guidance in ASU No. 2016-18 in the first quarter of 2018 did not have an impact on our consolidated financial statements.

### **JOBS Act**

We are an "emerging growth company" as defined under the Jumpstart Our Business Startups Act of 2012, or JOBS Act. The JOBS Act contains provisions that, among other things, reduce certain reporting requirements for an "emerging growth company." As an "emerging growth company," we have elected not to take advantage of the extended transition period afforded by the JOBS Act for the implementation of new or revised accounting standards, and as a result, we will comply with new or revised accounting standards on the relevant dates on which adoption of such standards is required for non-emerging growth companies. Section 107 of the JOBS Act provides that our decision not to take advantage of the extended transition period is irrevocable.

Subject to certain conditions set forth in the JOBS Act, as an "emerging growth company," we are not required to, among other things, (i) provide an auditor's attestation report on our system of internal controls over financial reporting pursuant to Section 404, (ii) provide all of the compensation disclosure that may be required of non-emerging growth public companies under the Dodd-Frank Wall Street Reform and Consumer Protection Act, (iii) comply with any requirement that may be adopted by the Public Company Accounting Oversight Board regarding mandatory audit firm rotation or a supplement to the auditor's report providing additional information about the audit and the financial statements (auditor discussion and analysis), and (iv) disclose certain executive compensation-related items such as the correlation between executive compensation and performance and comparisons of the chief executive officer's compensation to median employee compensation. These exemptions will apply until December 31, 2020 or until we no longer meet the requirements for being an "emerging growth company," whichever occurs first.

**Item 3. Quantitative and Qualitative Disclosures About Market Risk**

We are exposed to various market risks, which may result in potential losses arising from adverse changes in market rates, such as interest rates and foreign exchange rates. We do not enter into derivative instruments or other financial instruments for trading or speculative purposes nor do we engage in any hedging activities. As of March 31, 2018, we had cash and cash equivalents of \$52.1 million consisting primarily of cash and money market account balances. Because of the short-term maturities of our cash and cash equivalents, we do not believe that an immediate 10% increase in interest rates would have any significant impact on the realized value of our investments. Accordingly, we do not believe we are exposed to material market risk with respect to our cash and cash equivalents.

We have engaged third parties to manufacture our product candidates in Australia, Canada and Europe and to conduct clinical trials for our product candidates in Australia and New Zealand. Manufacturing and research costs related to these operations are paid for in a combination of U.S. dollars and local currencies, limiting our foreign currency exchange rate risk. Accordingly, we do not believe our foreign currency exchange rate risk is significant due to the limited extent of our operations in foreign currencies; however, if we conduct clinical trials and seek to manufacture a more significant portion of our product candidates outside of the United States in the future, we could incur significant foreign currency exchange rate risk.

**Item 4. Controls and Procedures.**

**Evaluation of Disclosure Controls and Procedures**

Our management, with the participation of our Chief Executive Officer and Chief Financial Officer, evaluated the effectiveness of our disclosure controls and procedures as of March 31, 2018. The term “disclosure controls and procedures,” as defined in Rules 13a-15(e) and 15d-15(e) under the Securities Exchange Act of 1934, as amended, or the Exchange Act, means controls and other procedures of a company that are designed to ensure that information required to be disclosed by a company in the reports that it files or submits under the Exchange Act is recorded, processed, summarized and reported, within the time periods specified in the rules and forms, promulgated by the Securities and Exchange Commission. Management recognizes that any controls and procedures, no matter how well designed and operated, can provide only reasonable assurance of achieving their objectives and management necessarily applies its judgment in evaluating the cost-benefit relationship of possible controls and procedures. Based on the evaluation of the effectiveness of the design and operation of our disclosure controls and procedures as of March 31, 2018, our Chief Executive Officer and Chief Financial Officer concluded that, as of such date, our disclosure controls and procedures were effective at the reasonable assurance level.

**Changes in Internal Control Over Financial Reporting**

There were no changes in our internal control over financial reporting during the three months ended March 31, 2018 that have materially affected, or are reasonably likely to materially affect, our internal control over financial reporting.

**PART II—OTHER INFORMATION**

**Item 1. Legal Proceedings.**

We are not currently a party to any legal proceedings.

**Item 1A. Risk Factors.**

You should carefully consider the risk factors described in our December 31, 2017 Annual Report, under the caption “Item 1.A “Risk Factors”. There have been no material changes to the risk factors disclosed in our 2017 Annual Report.

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**Item 2. Unregistered Sales of Equity Securities and Use of Proceeds.**

**Recent Sales of Unregistered Securities**

None.

**Purchase of Equity Securities**

We did not purchase any of our registered equity securities during the period covered by this Quarterly Report on Form 10-Q.

**Item 3. Defaults Upon Senior Securities.**

None.

**Item 4. Mine Safety Disclosures.**

None.

**Item 5. Other Information.**

Not applicable

**Item 6. Exhibits.**

The following exhibits are being filed herewith:

**EXHIBIT INDEX**

<b><u>Exhibit No.</u></b>	<b><u>Exhibit</u></b>
10.1	<a href="#"><u>Lease amendment dated February 9, 2018, by and between Provco Devon, L.L.C. and the registrant. Incorporated herein by reference to Exhibit 10.19 to the registrant's Annual Report on Form 10-K for the year ended December 31, 2017 (File No. 001-37526) filed on March 12, 2018.</u></a>
31.1	<a href="#"><u>Certification of Chief Executive Officer pursuant to Rules 13a-14(a) or 15d-14(a) of the Securities Exchange Act of 1934, as adopted pursuant to Section 302 of the Sarbanes-Oxley Act of 2002 (filed herewith).</u></a>
31.2	<a href="#"><u>Certification of Chief Financial Officer pursuant to Rules 13a-14(a) or 15d-14(a) of the Securities Exchange Act of 1934, as adopted pursuant to Section 302 of the Sarbanes-Oxley Act of 2002 (filed herewith).</u></a>
32.1	<a href="#"><u>Certification of Chief Executive Officer pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002 (furnished herewith).</u></a>
32.2	<a href="#"><u>Certification of Chief Financial Officer pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002 (furnished herewith).</u></a>
101 INS	XBRL Instance Document (filed herewith).
101 SCH	XBRL Taxonomy Extension Schema Document (filed herewith).
101 CAL	XBRL Taxonomy Extension Calculation Linkbase Document (filed herewith).
101 DEF	XBRL Taxonomy Extension Definition Linkbase Document (filed herewith).
101 LAB	XBRL Taxonomy Extension Label Linkbase Document (filed herewith).
101 PRE	XBRL Taxonomy Extension Presentation Linkbase Document (filed herewith).





## CERTIFICATION

I, Armando Anido, certify that:

1. I have reviewed this quarterly report on Form 10-Q of Zynserba Pharmaceuticals, Inc.;
2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;
3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;
4. The registrant's other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:
  - (a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;
  - (b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;
  - (c) Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and
  - (d) Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and
5. The registrant's other certifying officer and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):
  - (a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and
  - (b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

By: /s/ Armando Anido

Name: Armando Anido

Title: Chairman and Chief Executive Officer

Dated: May 8, 2018

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## CERTIFICATION

I, James E. Fickenscher, certify that:

1. I have reviewed this quarterly report on Form 10-Q of Zynerba Pharmaceuticals, Inc.;
2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;
3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;
4. The registrant's other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:
  - (a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;
  - (b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;
  - (c) Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and
  - (d) Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and
5. The registrant's other certifying officer and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):
  - (a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and
  - (b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

By: /s/ James E. Fickenscher

Name: James E. Fickenscher

Title: Chief Financial Officer

Dated: May 8, 2018

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**CERTIFICATION PURSUANT TO  
18 U.S.C. SECTION 1350,  
AS ADOPTED PURSUANT TO  
SECTION 906 OF THE SARBANES-OXLEY ACT OF 2002**

In connection with the quarterly report of Zynherba Pharmaceuticals, Inc. (the "Company") on Form 10-Q for the fiscal quarter ended March 31, 2018 as filed with the Securities and Exchange Commission on the date hereof (the "Report"), I, Armando Anido, Chairman and Chief Executive Officer of the Company, certify, pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, that:

- (1) The Report fully complies with the requirements of section 13(a) or 15(d) of the Securities Exchange Act of 1934; and
- (2) The information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Company.

/s/ Armando Anido

Armando Anido  
Chairman and Chief Executive Officer

Dated: May 8, 2018

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**CERTIFICATION PURSUANT TO  
18 U.S.C. SECTION 1350,  
AS ADOPTED PURSUANT TO  
SECTION 906 OF THE SARBANES-OXLEY ACT OF 2002**

In connection with the quarterly report of Zynerva Pharmaceuticals, Inc. (the "Company") on Form 10-Q for the fiscal quarter ended March 31, 2018 as filed with the Securities and Exchange Commission on the date hereof (the "Report"), I, James E. Fickenscher, Chief Financial Officer of the Company, certify, pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, that:

- (1) The Report fully complies with the requirements of section 13(a) or 15(d) of the Securities Exchange Act of 1934; and
- (2) The information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Company.

/s/ James E. Fickenscher

James E. Fickenscher  
Chief Financial Officer

Dated: May 8, 2018

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