

ACELRX PHARMACEUTICALS INC

Form 424B5

July 11, 2018

Filed pursuant to Rule 424(b)(5)

Registration No. 333-218506

**The information in this preliminary prospectus supplement is not complete and may be changed. A registration statement relating to these securities has been declared effective by the Securities and Exchange Commission. This preliminary prospectus supplement and the accompanying prospectus are not an offer to sell these securities, and we are not soliciting offers to buy these securities, in any state or other jurisdiction where the offer or sale is not permitted.**

SUBJECT TO COMPLETION, DATED JULY 11, 2018

## **PROSPECTUS SUPPLEMENT**

(To Prospectus dated June 14, 2017)

### **Shares**

#### **Common Stock**

We are offering \_\_\_\_\_ shares of our common stock. Our common stock is listed on the Nasdaq Global Market under the symbol "ACRX." On July 10, 2018, the last reported sale price of our common stock on the Nasdaq Global Market was \$3.45 per share.

**Investing in our common stock involves a high degree of risk. Please read "Risk Factors" beginning on page S-4 of this prospectus supplement, on page 4 of the accompanying prospectus and in the documents incorporated by reference into this prospectus supplement.**

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

	<b>PER SHARE</b>	<b>TOTAL</b>
Public Offering Price	\$	\$
Underwriting Discounts and Commissions <sup>(1)</sup>	\$	\$
Proceeds to AcelRx Pharmaceuticals, Inc. before expenses	\$	\$

(1) We have agreed to reimburse the underwriters for certain expenses. See "Underwriting."

Delivery of the shares of common stock is expected to be made on or about \_\_\_\_\_, 2018. We have granted the underwriters an option for a period of 30 days to purchase up to an additional \_\_\_\_\_ shares of our common stock. If the underwriters exercise the option in full, the total underwriting discounts and commissions payable by us will be \$ \_\_\_\_\_ and the total proceeds to us, before expenses, will be \$ \_\_\_\_\_.

*Sole Book-Running Manager*

**Cantor**

*Lead Manager*

**H.C. Wainwright & Co.**

Prospectus Supplement dated July , 2018

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#### PROSPECTUS

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**You should rely only on the information contained in or incorporated by reference in this prospectus supplement, the accompanying prospectus and in any free writing prospectus that we have authorized for use in connection with this offering. We have not, and the underwriters have not, authorized anyone to provide you with different information. If anyone provides you with different or inconsistent information, you should not rely on it. We and the underwriters take no responsibility for, and can provide no assurance as to the reliability of, any other information that others may give you. We are not, and the underwriters are not, making an offer to sell these shares of common stock in any jurisdiction where the offer or sale is not permitted. You should assume that the information appearing in this prospectus supplement, the accompanying prospectus, the documents incorporated by reference in this prospectus supplement and the accompanying prospectus, and in any free writing prospectus that we have authorized for use in connection with this offering, is accurate only as of the date of those respective documents, regardless of when such documents are delivered. Our business, financial condition, results of operations and prospects may have changed since those dates. You should read this prospectus supplement, the accompanying prospectus, the documents incorporated by reference in this prospectus supplement and the accompanying prospectus, and any free writing prospectus that we have authorized for use in connection with this offering, in their entirety before making an investment decision. You should also read and consider the information in the documents we have referred you to in the sections of this prospectus supplement entitled “Where You Can Find More Information” and “Incorporation of Certain Information by Reference.”**

## **ABOUT THIS PROSPECTUS SUPPLEMENT**

This document is in two parts. The first part is this prospectus supplement, which describes the terms of this offering of common stock and also adds to and updates information contained in the accompanying prospectus and the documents incorporated by reference into this prospectus supplement and the accompanying prospectus. The second part, the accompanying prospectus dated June 14, 2017, including the documents incorporated by reference therein, provides more general information that may not relate to this offering. Generally, when we refer to this prospectus, we are referring to both parts of this document combined. To the extent there is a conflict between the information contained in this prospectus supplement, on the one hand, and the information contained in the accompanying prospectus or in any document incorporated by reference that was filed with the Securities and Exchange Commission, or SEC, before the date of this prospectus supplement, on the other hand, you should rely on the information in this prospectus supplement. If any statement in one of these documents is inconsistent with a statement in another document having a later date (for example, a document incorporated by reference in the accompanying prospectus), the statement in the document having the later date modifies or supersedes the earlier statement.

All references in this prospectus supplement and the accompanying prospectus to “AcelRx,” “AcelRx Pharmaceuticals,” “the company,” “we,” “us,” “our,” or similar references refer to AcelRx Pharmaceuticals, Inc. and its consolidated subsidiary, except where the context otherwise requires or as otherwise indicated.

“DSUVIA” is a trademark, and “ACELRX” and “ZALVISO” are registered trademarks, all owned by AcelRx Pharmaceuticals, Inc. This prospectus supplement also contains trademarks and trade names that are the property of their respective owners. We do not intend to use or display other companies’ trademarks and trade names to imply any relationship with, or endorsement or sponsorship of us by, any other companies. Solely for convenience, the trademarks, service marks and trade names referred to in this prospectus may be listed without the ® and ™ symbols, but such references should not be construed as any indicator that their respective owners will not assert, to the fullest extent under applicable law, their right thereto.

## PROSPECTUS SUPPLEMENT SUMMARY

*This summary highlights certain information about us, this offering and selected information contained elsewhere in or incorporated by reference into this prospectus supplement. This summary is not complete and does not contain all of the information that you should consider before deciding whether to invest in our common stock. For a more complete understanding of the company and this offering, you should read and consider carefully the more detailed information in this prospectus supplement and the accompanying prospectus, including the information incorporated by reference in this prospectus supplement, the accompanying prospectus and the information included in any free writing prospectus that we have authorized for use in connection with this offering. If you invest in our common stock, you are assuming a high degree of risk. See “Risk Factors” beginning on page S-4 of this prospectus supplement, on page 4 of the accompanying prospectus and in the documents incorporated by reference into this prospectus supplement.*

### Overview

We are a specialty pharmaceutical company focused on the development and commercialization of innovative therapies for use in medically supervised settings. Our product candidates, focused on the treatment of acute pain, are DSUVIA™ (known as DZUVEO™ outside of the United States) and Zalviso®. Each is a sublingual sufentanil formulation, designed to be delivered via a non-invasive route of sublingual administration exclusively for use in medically supervised settings. In May 2018, we announced the resubmission of the new drug application, or NDA, for DSUVIA to the U.S. Food and Drug Administration, or FDA. We anticipate a six-month review by the FDA, which assigned a Prescription Drug User Fee Act, or PDUFA, goal date of November 3, 2018. On June 27, 2018, we announced that the European Commission, or EC, had adopted the positive opinion of the Committee for Medicinal Products for Human Use for DZUVEO and approved DZUVEO, which means that DZUVEO can be commercialized in the European Economic Area (which includes the 28 European Union member states as well as Norway, Iceland and Liechtenstein), or EEA.

We anticipate developing a distribution capability and commercial organization to market and sell DSUVIA, if approved, in the United States by ourselves, and potentially, in EEA countries with strategic partners. In geographies where we decide not to commercialize ourselves, we may seek to out-license commercialization rights. We plan to resubmit our NDA for Zalviso in the second half of 2018. If we are successful in obtaining approval of Zalviso in the United States, we plan to potentially promote Zalviso either by ourselves or with strategic partners. Zalviso has been approved by the European Commission and is authorized for marketing in the EEA, and it is currently being commercialized by Grünenthal GmbH, or Grünenthal, and has been used by over 21,000 patients through March 31, 2018.

We have chosen sufentanil as the active ingredient for our current product candidates. Opioids have been utilized for pain relief for centuries and are the standard-of-care for the treatment of moderate-to-severe acute pain. Sufentanil, a

high-therapeutic index opioid, which has no active metabolites, is available as an injectable in several markets around the world and is used by anesthesiologists for induction of sedation or as an epidural; however, the injectable formulation is not suitable for the treatment of acute pain. Sufentanil has many pharmacological advantages over other opioids. Published studies demonstrate that sufentanil produces significantly less respiratory depressive effects relative to its analgesic effects compared to other opioids, including morphine and fentanyl. These third-party clinical results correlate well with preclinical trials demonstrating sufentanil's high therapeutic index, or the ratio of the toxic dose to the therapeutic dose of a drug, used as a measure of the relative safety of the drug for a particular treatment. Accordingly, we believe that sufentanil can be developed to provide an effective and well-tolerated treatment for acute pain.

We have created a proprietary sublingual (under the tongue) formulation of sufentanil intended for the treatment of moderate-to-severe acute pain. The sublingual formulation is designed to retain the therapeutic value of sufentanil with a novel delivery device to provide a non-invasive route of administration. Sufentanil is highly lipophilic that has shown rapid absorption in the mucosal tissue, or fatty cells, found under the tongue, resulting in rapid transit across the blood-brain barrier to reach the mu-opioid receptors in the brain. The sublingual route of delivery used by DSUVIA and Zalviso has been found in clinical studies to provide a predictable onset of analgesia. The sublingual delivery system also eliminates the risk of intravenous, or IV, complications, such as catheter-related infections. In addition, because patients do not require direct connection to an IV infusion pump, or IV line, DSUVIA and Zalviso may allow for ease of patient mobility.

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## **Financial Update**

Our financial statements for the quarter ended June 30, 2018 will not be available until after this offering is completed and consequently will not be available to you prior to investing in this offering. Based upon preliminary estimates and information available to us as of the date of this prospectus supplement, we estimate that we had approximately \$50 million of cash, cash equivalents and short-term investments as of June 30, 2018, which we believe will be sufficient to fund our operations through at least the next 12 months. This estimate of our cash, cash equivalents and short-term investments as of June 30, 2018 is preliminary, has not been reviewed and is subject to change upon completion of our financial statement closing procedures. Additional information and disclosure would be required for a more complete understanding of our financial position and results of operations as of June 30, 2018.

## **Corporate Information**

We were originally incorporated as SuRx, Inc. in Delaware on July 13, 2005 and changed our name to AcelRx Pharmaceuticals, Inc. on August 13, 2006. Our principal executive offices are located at 351 Galveston Drive, Redwood City, California 94063, and our telephone number is (650) 216-3500. Our website address is [www.acelrx.com](http://www.acelrx.com). The information contained in, or that can be accessed through, our website is not part of, and is not incorporated into, this prospectus supplement or the accompanying prospectus and should not be considered part of this prospectus supplement or the accompanying prospectus.



## THE OFFERING

Common stock offered by us	shares
Common stock to be outstanding immediately after this offering	shares (or exercised in full) shares if the underwriters' option to purchase additional shares is exercised in full)
Option to purchase additional shares	We have granted the underwriters an option to purchase up to additional shares of our common stock. This option is exercisable, in whole or in part, for a period of 30 days from the date of this prospectus supplement.
Use of proceeds	We intend to use the net proceeds from this offering for general corporate purposes, including funding of early commercialization efforts. See "Use of Proceeds" on page S-7 of this prospectus supplement.
Listing	Our common stock is listed on the Nasdaq Global Market under the symbol "ACRX."
Risk Factors	An investment in our common stock involves a high degree of risk. See "Risk Factors" beginning on page S-4 of this prospectus supplement, on page 4 of the accompanying prospectus and in the documents incorporated by reference into this prospectus supplement.

## Outstanding Shares

The number of shares of common stock outstanding immediately after this offering is based on 50,991,444 shares of common stock outstanding as of March 31, 2018. This number excludes:

176,730 shares of common stock issuable upon the exercise of warrants outstanding as of March 31, 2018, at a weighted average exercise price of \$3.07 per share;

10,375,368 shares of common stock issuable upon the exercise of options outstanding as of March 31, 2018, at a weighted average exercise price of \$3.84 per share;

2,335,743 shares of common stock issued and sold under our existing Sales Agreement since March 31, 2018, at a weighted average sales price of \$3.26 per share; and

up to an aggregate of 3,433,647 shares of common stock reserved for future issuance under our 2011 Equity Incentive Plan and 2011 Employee Stock Purchase Plan.

In addition, the number of shares outstanding immediately after this offering excludes shares of common stock that we may sell pursuant to our an Controlled Equity Offering<sup>SM</sup> Sales Agreement, or the Sales Agreement, that we entered into with Cantor Fitzgerald & Co., or Cantor, on June 21, 2016. Under the Sales Agreement, we may issue and sell shares of our common stock having an aggregate offering price of up to \$40 million from time to time after the expiration of the 60-day lock-up period applicable to us and described in “Underwriting” in such amounts as we may determine, subject to certain limitations contained therein and under applicable securities laws. As of the date of this prospectus, we had issued and sold an aggregate of 7.7 million shares of common stock pursuant to the Sales Agreement, for which we had received net proceeds of approximately \$23.1 million, after deducting commissions, fees and expenses of \$0.7 million.

Except as otherwise indicated, all information included or incorporated by reference in this prospectus supplement assumes no exercise by the underwriters of their option to purchase additional shares.

## **RISK FACTORS**

*An investment in our common stock involves a high degree of risk. Before deciding whether to invest in our common stock, you should consider carefully the risks described below together with the other information in this prospectus supplement, the accompanying prospectus, the information and documents incorporated by reference herein and therein, and in any free writing prospectus that we have authorized for use in connection with this offering. If any of these risks actually occur, our business, financial condition, results of operations or cash flows could be seriously harmed. This could cause the trading price of our common stock to decline, resulting in a loss of all or part of your investment. The risks described below are not the only ones that we face. Additional risks not presently known to us or that we currently deem immaterial may also affect our business operations.*

### **Risks Relating to this Offering**

*Our management will have broad discretion as to the use of the proceeds from this offering, and may not use the proceeds effectively.*

Our management will have broad discretion as to the application of the net proceeds from this offering and could use them for purposes other than those contemplated at the time of the offering. Our management may use the net proceeds for corporate purposes that may not improve our financial condition or market value. Our failure to apply these funds effectively could have a material adverse effect on our business, delay the development of our product candidates and cause the price of our common stock to decline.

*You may experience immediate and substantial dilution in the net tangible book value per share of the common stock you purchase.*

Since the public offering price per share of our common stock is higher than the net tangible book value per share of our common stock, you will suffer immediate and substantial dilution in the net tangible book value of the common stock you purchase in this offering. As a result, investors purchasing shares of common stock in this offering will incur immediate dilution of approximately \$            per share, based upon the public offering price of \$            per share and our net tangible book value as of March 31, 2018, after giving effect to this offering. See “Dilution” for a more detailed discussion of the dilution you will incur if you purchase common stock in this offering. In addition, we have a significant number of stock options outstanding. To the extent that outstanding stock options or warrants have been or may be exercised, investors purchasing our common stock in this offering may experience further dilution.

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

In order to raise additional capital, we may in the future offer additional shares of our common stock, including pursuant to the Sales Agreement with Cantor, or other securities convertible into or exchangeable for our common stock at prices that may not be the same as the price per share paid by any investor in this offering. We may sell shares or other securities in any other offering at a price per share that is less than the price per share paid by investors in this offering, and investors purchasing shares or other securities in the future could have rights that are superior to those of existing stockholders. The price per share at which we sell additional shares of our common stock, or securities convertible or exchangeable into common stock, in future transactions may be higher or lower than the price per share paid by investors in this offering.

***If securities or industry analysts do not publish research or reports about our business, or publish negative reports about our business, our stock price and trading volume could decline.***

The trading market for our common stock will be influenced by the research and reports that securities or industry analysts publish about us or our business. We do not have any control over these analysts. If one or more of the analysts who cover us downgrade our stock or change their opinion of our stock in a negative manner, our stock price would likely decline. If one or more of these analysts cease coverage of our company or fail to regularly publish reports on us, we could lose visibility in the financial markets, which could cause our stock price or trading volume to decline.

## **SPECIAL NOTE REGARDING FORWARD-LOOKING STATEMENTS**

This prospectus supplement, the accompanying prospectus, the documents we have filed with the SEC that are incorporated herein by reference and any free writing prospectus that we have authorized for use in connection with this offering contain forward-looking statements within the meaning of Section 27A of the Securities Act of 1933, as amended, or the Securities Act, and Section 21E of the Securities Exchange Act of 1934, as amended, or the Exchange Act. These statements relate to future events or our future financial performance and involve known and unknown risks, uncertainties and other factors that may cause our actual results, levels of activity, performance or achievements to differ materially from any future results, levels of activity, performance or achievements expressed or implied by these forward-looking statements. In some cases, you can identify forward-looking statements by terms such as “may,” “will,” “should,” “could,” “would,” “expects,” “plans,” “anticipates,” “believes,” “estimates,” “projects,” “predicts,” “potential” or “could be,” and other comparable terminology and similar expressions intended to identify forward-looking statements. These forward-looking statements may also use different phrases. These statements involve risks, uncertainties and other factors that may cause our actual results, levels of activity, performance or achievements to be materially different from the information expressed or implied by these forward-looking statements. These statements reflect our current views with respect to future events, are based on current expectations, assumptions, estimates and projections about our business and our industry, and are subject to risks and uncertainties. Although we believe that we have a reasonable basis for each forward-looking statement contained in this prospectus supplement and the accompanying prospectus, including the information incorporated herein and therein by reference, we caution you that these statements are based on a combination of facts and factors currently known by us and our projections of the future, about which we cannot be certain. Many important factors affect our ability to achieve our objectives, including:

our ability to consummate this offering in the size and manner described herein;

our ability to obtain, without further delays, and maintain regulatory approval of DSUVIA in the United States and any related restrictions, limitations, and/or warnings in the label of an approved product candidate;

our ability to commercialize DZUVEO in Europe, including our ability to potentially secure a strategic partner to whom we would out-license our commercialization rights;

our ability to successfully execute the pathway towards a resubmission of the ZALVISO NDA and subsequently obtain, without further delays, and maintain regulatory approval of ZALVISO in the United States and any related restrictions, limitations, and/or warnings in the label of an approved product candidate;

the outcome of any potential FDA Advisory Committee meeting held for any of our product candidates;

our ability to manufacture and supply ZALVISO to Grünenthal in accordance with their forecast and our Manufacture and Supply Agreement with Grünenthal;

the status of our Collaboration and License Agreement with Grünenthal or any other future potential collaborations, including potential milestones and royalty payments under such agreement and obligations under our Purchase and Sale Agreement with PDL BioPharma, Inc.;

our plans to research, develop and commercialize our product candidates;

our ability to attract additional collaborators with development, regulatory and commercialization expertise;

our ability to successfully retain our key scientific, engineering, medical or management personnel and hire new personnel as needed;

the size and growth potential of the markets for our product candidates, and our ability to serve those markets;

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our ability to successfully commercialize our product candidates;

the rate and degree of market acceptance of our product candidates;

our ability to develop sales and marketing capabilities in a timely fashion, whether alone through recruiting qualified employees, by engaging a contract sales organization, or with potential future collaborators;

our ability to manufacture and supply DSUVIA, if approved, in support of any potential U.S. commercial launch;

our ability to manufacture and supply DZUVEO in support of the European commercial launch;

our ability to obtain adequate government or third-party payer reimbursement;

regulatory developments in the United States and foreign countries;

the performance of our third-party suppliers and manufacturers;

the success of competing therapies that are or become available;

the accuracy of our estimates regarding expenses, future revenues, capital requirements and needs for additional financing;

our liquidity and capital resources; and

our ability to obtain and maintain intellectual property protection for our product candidates.

We discuss in greater detail, and incorporate by reference into this prospectus supplement in their entirety, many of these risks under the headings “Risk Factors” on page S-4 of this prospectus supplement, in our Annual Report on Form 10-K for the year ended December 31, 2017 and in our Quarterly Report on Form 10-Q for the quarter ended March 31, 2018. Also, these forward-looking statements represent our estimates and assumptions only as of the date of the document containing the applicable statement.

You should read this prospectus supplement, the accompanying prospectus, the documents we have filed with the SEC that are incorporated by reference herein and therein, and any free writing prospectus that we have authorized for use in connection with this offering completely and with the understanding that our actual future results may be

materially different from what we expect. We qualify all of the forward-looking statements in the foregoing documents by these cautionary statements.

Unless required by law, we undertake no obligation to update or revise any forward-looking statements to reflect new information or future events or developments. Thus, you should not assume that our silence over time means that actual events are bearing out as expressed or implied in such forward-looking statements.

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## USE OF PROCEEDS

We estimate that the net proceeds from the sale of the shares of common stock in this offering will be approximately \$        million, or approximately \$        million if the underwriters exercise in full their option to purchase additional shares of common stock, in each case based on the public offering price of \$        per share and after deducting the underwriting discounts and commissions and estimated offering expenses payable by us.

We intend to use the net proceeds from this offering for general corporate purposes, including funding of early commercialization efforts.

The amounts and timing of our use of the net proceeds from this offering will depend on a number of factors, such as the timing and progress of our research and development efforts, the timing and progress of any partnering and collaboration efforts and technological advances. As of the date of this prospectus supplement, we cannot specify with certainty all of the particular uses for the net proceeds to us from this offering. Accordingly, our management will have broad discretion in the timing and application of these proceeds. Pending application of the net proceeds as described above, we intend to temporarily invest the proceeds in high-quality, short-term, interest-bearing instruments.

## **DIVIDEND POLICY**

To date, we have never declared or paid any cash dividends on our capital stock, and we are prohibited from doing so under the terms of our existing credit facility. Regardless of the restrictions under our existing credit facility or the terms of any potential future indebtedness, we anticipate that we will retain all available funds and any future earnings to support our operations and finance the growth and development of our business and, therefore, we do not expect to pay cash dividends in the foreseeable future. Any future determination related to our dividend policy will be made at the discretion of our board of directors and will depend on then-existing conditions, including our financial condition, operating results, contractual restrictions, capital requirements, business prospects and other factors our board of directors may deem relevant.

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**DILUTION**

Our net tangible book value as of March 31, 2018 was approximately \$(46.9) million, or \$(0.92) per share of common stock. We calculate tangible book value per share by dividing our total tangible assets, less total liabilities, by the number of shares of our common stock outstanding as of March 31, 2018. If you invest in our common stock in this offering, your ownership interest will be diluted to the extent of the difference between the public offering price per share paid by purchasers of shares of our common stock in this offering and our as adjusted net tangible book value per share immediately after this offering.

After giving effect to the sale of \_\_\_\_\_ shares of our common stock in this offering at the public offering price of \$ \_\_\_\_\_ per share and after deducting the underwriting discounts and commissions and estimated offering expenses payable by us, our as adjusted net tangible book value as of March 31, 2018 would have been approximately \$ \_\_\_\_\_ million, or \$ \_\_\_\_\_ per share. This represents an immediate increase in net tangible book value of \$ \_\_\_\_\_ per share to existing stockholders and immediate dilution in net tangible book value of \$ \_\_\_\_\_ per share to new investors purchasing our common stock in this offering at the public offering price. The following table illustrates this dilution on a per share basis:

Public offering price per share		\$
Net tangible book value per share as of March 31, 2018	\$	(0.92)
Increase per share attributable to investors purchasing our common stock in this offering		
As adjusted net tangible book value per share after this offering		
Dilution per share to investors purchasing our common stock in this offering		\$

If the underwriters exercise in full their option to purchase \_\_\_\_\_ additional shares of common stock at the public offering price of \$ \_\_\_\_\_ per share, the as adjusted net tangible book value after this offering would be \$ \_\_\_\_\_ per share, representing an increase in net tangible book value of \$ \_\_\_\_\_ per share to existing stockholders and

immediate dilution of \$ \_\_\_\_\_ per share to new investors purchasing our common stock in this offering at the public offering price.

The above discussion and table are based on 50,991,444 shares of common stock outstanding as of March 31, 2018 and exclude:

176,730 shares of common stock issuable upon the exercise of warrants outstanding as of March 31, 2018, at a weighted average exercise price of \$3.07 per share;

10,375,368 shares of common stock issuable upon the exercise of options outstanding as of March 31, 2018, at a weighted average exercise price of \$3.84 per share;

2,335,743 shares of common stock issued and sold under our existing Sales Agreement since March 31, 2018, at a weighted average sales price of \$3.26 per share; and

up to an aggregate of 3,433,647 shares of common stock reserved for future issuance under our 2011 Equity Incentive Plan and 2011 Employee Stock Purchase Plan.

In addition, the number of shares outstanding immediately after this offering excludes shares of common stock that we may sell pursuant to the Sales Agreement with Cantor. Under the Sales Agreement, we may issue and sell shares of our common stock having an aggregate offering price of up to \$40 million from time to time after the expiration of the 60-day lock-up period applicable to us and described in “Underwriting” in such amounts as we may determine, subject to certain limitations contained therein and under applicable securities laws. As of the date of this prospectus, we had issued and sold an aggregate of 7.7 million shares of common stock pursuant to the Sales Agreement, for which we had received net proceeds of approximately \$23.1 million, after deducting commissions, fees and expenses of \$0.7 million.

To the extent that options or warrants outstanding as of March 31, 2018 have been or are exercised, or other shares are issued, including pursuant to the Sales Agreement with Cantor, investors purchasing shares of common stock in this offering could experience further dilution. In addition, we may choose to raise capital in addition to the amounts remaining available to be sold under our Sales Agreement with Cantor due to market conditions or strategic considerations, even if we believe we have sufficient funds for our current or future operating plans. To the extent that additional capital is raised through the sale of equity securities, the issuance of those securities could result in further dilution to our stockholders.

## UNDERWRITING

Subject to the terms and conditions set forth in the underwriting agreement, dated \_\_\_\_\_, 2018, between us and Cantor Fitzgerald & Co., 499 Park Avenue, New York, New York 10022, as representative of the underwriters named below, or the Representative, and the sole book-running manager of this offering, we have agreed to sell to the underwriters, and each of the underwriters has agreed, severally, or not jointly, to purchase from us, the shares of common stock shown opposite its name below:

<u>Underwriter</u>	<u>Number of Shares</u>
Cantor Fitzgerald & Co.	
H.C. Wainwright & Co., LLC	

Total

The underwriting agreement provides that the obligations of the several underwriters are subject to certain conditions precedent such as the receipt by the underwriters of officers' certificates and legal opinions and approval of certain legal matters by their counsel. The underwriting agreement provides that the underwriters will purchase all of the shares of common stock if any of them are purchased. We have agreed to indemnify the underwriters and certain of their controlling persons against certain liabilities, including liabilities under the Securities Act, and to contribute to payments that the underwriters may be required to make in respect of those liabilities.

The underwriters are offering the shares of common stock subject to their acceptance of the shares of common stock from us and subject to prior sale. The underwriters reserve the right to withdraw, cancel or modify offers to the public and to reject orders in whole or in part.

### **Option to Purchase Additional Shares**

We have granted to the underwriters an option, exercisable 30 days from the date of this prospectus supplement, to purchase, from time to time, in whole or in part, up to an aggregate of \_\_\_\_\_ shares from us at the public offering price set forth on the cover page of this prospectus supplement, less underwriting discounts and commissions. If the underwriters exercise this option, each underwriter will be obligated, subject to certain conditions, to purchase a number of additional shares approximately proportionate to that underwriter's initial purchase commitment as indicated in the table above.

## Commission and Expenses

The underwriters have advised us that they propose to offer the shares of common stock to the public at the public offering price set forth on the cover page of this prospectus supplement and to certain dealers, which may include the underwriters, at that price less a concession not in excess of \$        per share of common stock. The underwriters may allow, and certain dealers may reallocate, a discount from the concession not in excess of \$        per share of common stock to certain brokers and dealers. After the initial offering, the Representative may change the offering price and other selling terms.

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The following table shows the public offering price, the underwriting discounts and commissions that we are to pay the underwriters and the proceeds, before expenses, to us in connection with this offering. Such amounts are shown assuming both no exercise and full exercise of the underwriters' option to purchase additional shares.

	<b>Per Share</b>		<b>Total</b>	
	<b>Without Option to Purchase Additional Shares</b>	<b>With Option to Purchase Additional Shares</b>	<b>Without Option to Purchase Additional Shares</b>	<b>With Option to Purchase Additional Shares</b>
Public offering price	\$	\$	\$	\$
Underwriting discounts and commissions	\$	\$	\$	\$
Proceeds to us, before expenses	\$	\$	\$	\$

We estimate expenses payable by us in connection with this offering, other than the underwriting discounts and commissions referred to above, will be approximately \$ . We have also agreed to reimburse the underwriters for up to \$ of certain of their counsels' fees and expenses, which reimbursed fee is deemed underwriting compensation for this offering by FINRA.

### **Listing**

Our common stock is listed on The Nasdaq Global Market under the trading symbol "ACRX."

### **No Sales of Similar Securities**

We, our officers and our directors have agreed, subject to certain specified exceptions, not to directly or indirectly, for a period of 60 days after the date of the underwriting agreement:

sell, offer to sell, contract to sell or lend, effect any short sale or establish or increase a “put equivalent position” (as defined in Rule 16a-1(h) under the Exchange Act) or liquidate or decrease any “call equivalent position” (as defined in Rule 16a-1(b) under the Exchange Act), pledge, hypothecate or grant any security interest in, or in any other way transfer or dispose of, in each case whether effected directly or indirectly, any shares of common stock or options or warrants or other rights to acquire common stock or any securities exchangeable or exercisable for or convertible into common stock currently or hereafter owned either of record or beneficially,

enter into any swap, hedge or similar arrangement or agreement that transfers, in whole or in part, the economic risk of ownership of any shares of common stock or options or warrants or other rights to acquire common stock or any securities exchangeable or exercisable for or convertible into common stock, or

publicly announce an intention to do any of the foregoing.

In addition, we and each such person agrees that, without the prior written consent of Cantor Fitzgerald & Co., we or such other person will not, during the restricted period, make any demand for, or exercise any right with respect to, the registration of any shares of common stock or any security convertible into or exercisable or exchangeable for common stock.



The restrictions in the immediately preceding paragraph do not apply in certain circumstances, including, with respect to our directors and officers, transfers:

as a bona fide gift or gifts;

by will or intestate succession;

to any trust for the benefit of the undersigned or the immediate family of the undersigned (within the meaning of Rule 16a-1(e) under the Exchange Act);

to an affiliate of the party or distributions to partners, members of stockholders of the party, if such transfer is not for value;

to us in full or partial payment of exercise or purchase prices or to satisfy tax withholding obligations upon settlement, vesting or exercise of any equity award or warrant granted by us pursuant to our equity incentive plans disclosed in this prospectus;

pursuant to a sale or an offer to purchase 100% of our outstanding common stock, whether pursuant merger, tender offer or otherwise, provided that in the event such merger, tender offer or other transaction is not completed, such securities held by a party will remain subject to the lock-up agreement;

pursuant to a trading plan pursuant to Rule 10b-5 under the Exchange Act entered into prior to the date of the lock-up agreement, or the entrance into a trading plan pursuant to Rule 10b-5 under the Exchange Act, provided that any such plan entered into after the date of the lock-up agreement does not permit the sale of any common stock during the restricted period and no public announcement or filing is made regarding such plan during the restricted period; and

In our case, the restrictions described above do not apply in certain circumstances, including certain issuances upon exercise, vesting or conversion of stock options, restricted stock units, warrants, rights or convertible securities outstanding on the date of the lock-up agreement or pursuant to our equity incentive plans disclosed in this prospectus.

Cantor Fitzgerald & Co. may, in its sole discretion and at any time or from time to time before the termination of the 60-day period release all or any portion of the securities subject to lock-up agreements.

#### **Market Making, Stabilization and Other Transactions**

The underwriters may make a market in the common stock as permitted by applicable laws and regulations. However, the underwriters are not obligated to do so, and the underwriters may discontinue any market-making activities at any time without notice in their sole discretion. Accordingly, no assurance can be given as to the liquidity of the trading market for the common stock, that you will be able to sell any of the common stock held by you at a particular time or that the prices that you receive when you sell will be favorable.

The underwriters have advised us that they, pursuant to Regulation M under the Securities Exchange Act of 1934, as amended, may engage in short sale transactions, stabilizing transactions, syndicate covering transactions or the imposition of penalty bids in connection with this offering. These activities may have the effect of stabilizing or maintaining the market price of the common stock at a level above that which might otherwise prevail in the open market. Establishing short sales positions may involve either “covered” short sales or “naked” short sales.

“Covered” short sales are sales made in an amount not greater than the underwriters’ option to purchase additional shares of our common stock in this offering. The underwriters may close out any covered short position by either exercising their option to purchase additional shares of our common stock or purchasing shares of our common stock in the open market. In determining the source of shares to close out the covered short position, the underwriters will consider, among other things, the price of shares available for purchase in the open market as compared to the price at which they may purchase shares through the option to purchase additional shares.

“Naked” short sales are sales in excess of the option to purchase additional shares of our common stock. The underwriters must close out any naked short position by purchasing shares in the open market. A naked short position is more likely to be created if the underwriters are concerned that there may be downward pressure on the price of the shares of our common stock in the open market after pricing that could adversely affect investors who purchase in this offering.

A stabilizing bid is a bid for the purchase of shares of common stock on behalf of the underwriters for the purpose of fixing or maintaining the price of the common stock. A syndicate covering transaction is the bid for or the purchase of shares of common stock on behalf of the underwriters to reduce a short position incurred by the underwriters in connection with the offering. Similar to other purchase transactions, the underwriters' purchases to cover the syndicate short sales may have the effect of raising or maintaining the market price of our common stock or preventing or retarding a decline in the market price of our common stock. As a result, the price of our common stock may be higher than the price that might otherwise exist in the open market. A penalty bid is an arrangement permitting the underwriters to reclaim the selling concession otherwise accruing to a syndicate member in connection with the offering if the common stock originally sold by such syndicate member are purchased in a syndicate covering transaction and therefore have not been effectively placed by such syndicate member.

Neither we, nor any of the underwriters make any representation or prediction as to the direction or magnitude of any effect that the transactions described above may have on the price of our common stock. The underwriters are not obligated to engage in these activities and, if commenced, may end any of these activities at any time.

### **Passive Market Making**

The underwriters may also engage in passive market making transactions in our common stock on the NASDAQ in accordance with Rule 103 of Regulation M during a period before the commencement of offers or sales of shares of our common stock in this offering and extending through the completion of distribution. A passive market maker must display its bid at a price not in excess of the highest independent bid of that security. However, if all independent bids are lowered below the passive market maker's bid, that bid must then be lowered when specified purchase limits are exceeded. Passive market making may cause the price of our common stock to be higher than the price that otherwise would exist in the open market in the absence of those transactions. The underwriters are not required to engage in passive market making and, if commenced, may end passive market making activities at any time.

### **Electronic Distribution**

A prospectus in electronic format may be made available by e-mail or on the web sites or through online services maintained by one or more of the underwriters, selling group members (if any) or their affiliates. The underwriters may agree with us to allocate a specific number of shares of common stock for sale to online brokerage account holders. Any such allocation for online distributions will be made by the underwriters on the same basis as other allocations. Other than the prospectus in electronic format, the information on the underwriters' web sites and any information contained in any other web site maintained by any of the underwriters is not part of this prospectus supplement, has not been approved and/or endorsed by us or the underwriters and should not be relied upon by investors.

## **Other Activities and Relationships**

The underwriters and certain of their respective affiliates are full service financial institutions engaged in a wide range of activities for their own accounts and the accounts of customers, which may include, among other things, corporate finance, mergers and acquisitions, merchant banking, equity and fixed income sales, trading and research, derivatives, foreign exchange, futures, asset management, custody, clearance and securities lending. The underwriters and certain of their affiliates have, from time to time, performed, and may in the future perform, various investment banking and financial advisory services for us and our affiliates, for which they received or will receive customary fees and expenses.

In addition, in the ordinary course of its business, the underwriters and their respective affiliates may, directly or indirectly, hold long or short positions, trade and otherwise conduct such activities in or with respect to debt or equity securities and/or bank debt of, and/or derivative products. Such investment and securities activities may involve our securities and instruments. The underwriters and their respective affiliates may also make investment recommendations or publish or express independent research views in respect of such securities or instruments and may at any time hold, or recommend to clients that they acquire, long or short positions in such securities and instruments.

## **Stamp Taxes**

If you purchase shares of common stock offered in this prospectus supplement, you may be required to pay stamp taxes and other charges under the laws and practices of the country of purchase, in addition to the offering price listed on the cover page of this prospectus supplement.

## NOTICE TO INVESTORS

### Canada

This prospectus supplement constitutes an “exempt offering document” as defined in and for the purposes of applicable Canadian securities laws. No prospectus has been filed with any securities commission or similar regulatory authority in Canada in connection with the offer and sale of the common stock. No securities commission or similar regulatory authority in Canada has reviewed or in any way passed upon this prospectus supplement or on the merits of the common stock and any representation to the contrary is an offence.

**Canadian investors are advised that this prospectus supplement has been prepared in reliance on section 3A.3 of National Instrument 33-105 *Underwriting Conflicts* (“NI 33-105”). Pursuant to section 3A.3 of NI 33-105, this prospectus supplement is exempt from the requirement that the company and the underwriter(s) provide investors with certain conflicts of interest disclosure pertaining to “connected issuer” and/or “related issuer” relationships that may exist between the company and the underwriter(s) as would otherwise be required pursuant to subsection 2.1(1) of NI 33-105.**

### *Resale Restrictions*

The offer and sale of the common stock in Canada is being made on a private placement basis only and is exempt from the requirement that the company prepares and files a prospectus under applicable Canadian securities laws. Any resale of the common stock acquired by a Canadian investor in this offering must be made in accordance with applicable Canadian securities laws, which may vary depending on the relevant jurisdiction, and which may require resales to be made in accordance with Canadian prospectus requirements, pursuant to a statutory exemption from the prospectus requirements, in a transaction exempt from the prospectus requirements or otherwise under a discretionary exemption from the prospectus requirements granted by the applicable local Canadian securities regulatory authority. These resale restrictions may under certain circumstances apply to resales of the common stock outside of Canada.

### *Representations of Purchasers*

Each Canadian investor who purchases the common stock will be deemed to have represented to the company and the underwriter(s) that the investor (i) is purchasing the common stock as principal, or is deemed to be purchasing as principal in accordance with applicable Canadian securities laws, for investment only and not with a view to resale or redistribution; (ii) is an “accredited investor” as such term is defined in section 1.1 of National Instrument 45-106

*Prospectus Exemptions* (“NI 45-106”) or, in Ontario, as such term is defined in section 73.3(1) of the *Securities Act* (Ontario); and (iii) is a “permitted client” as such term is defined in section 1.1 of National Instrument 31-103 *Registration Requirements, Exemptions and Ongoing Registrant Obligations*.

### ***Taxation and Eligibility for Investment***

Any discussion of taxation and related matters contained in this prospectus supplement does not purport to be a comprehensive description of all of the tax considerations that may be relevant to a Canadian investor when deciding to purchase the common stock and, in particular, does not address any Canadian tax considerations. No representation or warranty is hereby made as to the tax consequences to a resident, or deemed resident, of Canada of an investment in the common stock or with respect to the eligibility of the common stock for investment by such investor under relevant Canadian federal and provincial legislation and regulations.

### ***Rights of Action for Damages or Rescission***

Securities legislation in certain of the Canadian jurisdictions provides certain purchasers of securities pursuant to an offering memorandum (such as this prospectus supplement), including where the distribution involves an “eligible foreign security” as such term is defined in Ontario Securities Commission Rule 45-501 *Ontario Prospectus and Registration Exemptions* and in Multilateral Instrument 45-107 *Listing Representation and Statutory Rights of Action Disclosure Exemptions*, as applicable, with a remedy for damages or rescission, or both, in addition to any other rights they may have at law, where the offering memorandum, or other offering document that constitutes an offering memorandum, and any amendment thereto, contains a “misrepresentation” as defined under applicable Canadian securities laws. These remedies, or notice with respect to these remedies, must be exercised or delivered, as the case may be, by the purchaser within the time limits prescribed under, and are subject to limitations and defences under, applicable Canadian securities legislation. In addition, these remedies are in addition to and without derogation from any other right or remedy available at law to the investor.

### ***Language of Documents***

Upon receipt of this document, each Canadian investor hereby confirms that it has expressly requested that all documents evidencing or relating in any way to the sale of the securities described herein (including for greater certainty any purchase confirmation or any notice) be drawn up in the English language only. *Par la réception de ce document, chaque investisseur Canadien confirme par les présentes qu'il a expressément exigé que tous les documents faisant foi ou se rapportant de quelque manière que ce soit à la vente des valeurs mobilières décrites aux présentes (incluant, pour plus de certitude, toute confirmation d'achat ou tout avis) soient rédigés en anglais seulement.*

### **Australia**

This prospectus is not a disclosure document for the purposes of Australia's Corporations Act 2001 (Cth) of Australia, or Corporations Act, has not been lodged with the Australian Securities & Investments Commission and is only directed to the categories of exempt persons set out below. Accordingly, if you receive this prospectus in Australia:

You confirm and warrant that you are either:

a "sophisticated investor" under section 708(8)(a) or (b) of the Corporations Act;

a "sophisticated investor" under section 708(8)(c) or (d) of the Corporations Act and that you have provided an accountant's certificate to the company which complies with the requirements of section 708(8)(c)(i) or (ii) of the Corporations Act and related regulations before the offer has been made; or

a "professional investor" within the meaning of section 708(11)(a) or (b) of the Corporations Act.

To the extent that you are unable to confirm or warrant that you are an exempt sophisticated investor or professional investor under the Corporations Act any offer made to you under this prospectus is void and incapable of acceptance.

You warrant and agree that you will not offer any of the shares issued to you pursuant to this prospectus for resale in Australia within 12 months of those securities being issued unless any such resale offer is exempt from the requirement to issue a disclosure document under section 708 of the Corporations Act.

## European Economic Area

In relation to each Member State of the European Economic Area , no offer of any securities which are the subject of the offering contemplated by this prospectus has been or will be made to the public in that Member State other than any offer where a prospectus has been or will be published in relation to such securities that has been approved by the competent authority in that Member State or, where appropriate, approved in another Member State and notified to the relevant competent authority in that Member State in accordance with the Prospectus Directive, except that an offer of such securities may be made to the public in that Member State:

to any legal entity which is a “qualified investor” as defined in the Prospectus Directive;

to fewer than 150, natural or legal persons (other than qualified investors as defined in the Prospectus Directive), as permitted under the Prospectus Directive, subject to obtaining the prior consent of the representative of the underwriters for any such offer; or

in any other circumstances falling within Article 3(2) of the Prospectus Directive,

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provided that no such offer of securities shall require the company or any of the underwriters to publish a prospectus pursuant to Article 3 of the Prospectus Directive or supplement a prospectus pursuant to Article 16 of the Prospectus Directive.

For the purposes of this provision, the expression an “offer to the public” in relation to any securities in any Member State means the communication in any form and by any means of sufficient information on the terms of the offer and the securities to be offered so as to enable an investor to decide to purchase or subscribe the securities, as the same may be varied in that Member State by any measure implementing the Prospectus Directive in that Member State and the expression “Prospectus Directive” means Directive 2003/71/EC (and amendments thereto, including the 2010 PD Amending Directive), and includes any relevant implementing measure in the Member State and the expression “2010 PD Amending Directive” means Directive 2010/73/EU.

## **Hong Kong**

No securities have been offered or sold, and no securities may be offered or sold, in Hong Kong, by means of any document, other than to persons whose ordinary business is to buy or sell shares or debentures, whether as principal or agent; or to “professional investors” as defined in the Securities and Futures Ordinance (Cap. 571) of Hong Kong and any rules made under that Ordinance; or in other circumstances which do not result in the document being a “prospectus” as defined in the Companies Ordinance (Cap. 32) of Hong Kong or which do not constitute an offer to the public within the meaning of the Companies Ordinance (Cap.32) of Hong Kong. No document, invitation or advertisement relating to the securities has been issued or may be issued or may be in the possession of any person for the purpose of issue (in each case whether in Hong Kong or elsewhere), which is directed at, or the contents of which are likely to be accessed or read by, the public of Hong Kong (except if permitted under the securities laws of Hong Kong) other than with respect to securities which are or are intended to be disposed of only to persons outside Hong Kong or only to “professional investors” as defined in the Securities and Futures Ordinance (Cap. 571) of Hong Kong and any rules made under that Ordinance.

This prospectus has not been registered with the Registrar of Companies in Hong Kong. Accordingly, this prospectus may not be issued, circulated or distributed in Hong Kong, and the securities may not be offered for subscription to members of the public in Hong Kong. Each person acquiring the securities will be required, and is deemed by the acquisition of the securities, to confirm that he is aware of the restriction on offers of the securities described in this prospectus and the relevant offering documents and that he is not acquiring, and has not been offered any securities in circumstances that contravene any such restrictions.

## **Japan**

The offering has not been and will not be registered under the Financial Instruments and Exchange Law of Japan (Law No. 25 of 1948 of Japan, as amended), or FIEL, and the Initial Purchaser will not offer or sell any securities, directly or indirectly, in Japan or to, or for the benefit of, any resident of Japan (which term as used herein means, unless otherwise provided herein, any person resident in Japan, including any corporation or other entity organized under the laws of Japan), or to others for re-offering or resale, directly or indirectly, in Japan or to a resident of Japan, except pursuant to an exemption from the registration requirements of, and otherwise in compliance with, the FIEL and any other applicable laws, regulations and ministerial guidelines of Japan.

## **Singapore**

This prospectus has not been and will not be lodged or registered with the Monetary Authority of Singapore. Accordingly, this prospectus and any other document or material in connection with the offer or sale, or the invitation for subscription or purchase of the securities may not be issued, circulated or distributed, nor may the securities be offered or sold, or be made the subject of an invitation for subscription or purchase, whether directly or indirectly, to the public or any member of the public in Singapore other than (i) to an institutional investor under Section 274 of the Securities and Futures Act, Chapter 289 of Singapore, or the SFA, (ii) to a relevant person as defined under Section 275(2), or any person pursuant to Section 275(1A) of the SFA, and in accordance with the conditions, specified in Section 275 of the SFA, or (iii) otherwise pursuant to, and in accordance with the conditions of any other applicable provision of the SFA.

Where the securities are subscribed or purchased under Section 275 of the SFA by a relevant person which is:

a corporation (which is not an accredited investor as defined under Section 4A of the SFA) the sole business of which is to hold investments and the entire share capital of which is owned by one or more individuals, each of whom is an accredited investor; or

a trust (where the trustee is not an accredited investor) whose sole purpose is to hold investments and each beneficiary is an accredited investor,

shares, debentures and units of shares and debentures of that corporation or the beneficiaries' rights and interest in that trust shall not be transferable for six months after that corporation or that trust has acquired the Offer Shares under Section 275 of the SFA except:

to an institutional investor under Section 274 of the SFA or to a relevant person defined in Section 275(2) of the SFA, or to any person pursuant to an offer that is made on terms that such shares, debentures and units of shares and debentures of that corporation or such rights and interest in that trust are acquired at a consideration of not less than \$200,000 (or its equivalent in a foreign currency) for each transaction, whether such amount is to be paid for in cash or by exchange of securities or other assets, and further for corporations, in accordance with the conditions, specified in Section 275 of the SFA;

where no consideration is given for the transfer; or

where the transfer is by operation of law.

## **Switzerland**

The securities may not be publicly offered in Switzerland and will not be listed on the SIX Swiss Exchange, or SIX, or on any other stock exchange or regulated trading facility in Switzerland. This prospectus has been prepared without regard to the disclosure standards for issuance prospectuses under art. 652a or art. 1156 of the Swiss Code of Obligations or the disclosure standards for listing prospectuses under art. 27 ff. of the SIX Listing Rules or the listing rules of any other stock exchange or regulated trading facility in Switzerland. Neither this prospectus nor any other offering or marketing material relating to the securities or the offering may be publicly distributed or otherwise made publicly available in Switzerland.

Neither this prospectus nor any other offering or marketing material relating to the offering, the company or the securities have been or will be filed with or approved by any Swiss regulatory authority. In particular, this prospectus will not be filed with, and the offer of securities will not be supervised by, the Swiss Financial Market Supervisory Authority FINMA, or FINMA, and the offer of securities has not been and will not be authorized under the Swiss Federal Act on Collective Investment Schemes, or CISA. The investor protection afforded to acquirers of interests in collective investment schemes under the CISA does not extend to acquirers of securities.

## **Israel**

This document does not constitute a prospectus under the Israeli Securities Law, 5728-1968, or the Securities Law, and has not been filed with or approved by the Israel Securities Authority. In the State of Israel, this document is being distributed only to, and is directed only at, and any offer of the shares is directed only at, investors listed in the first addendum, or the Addendum, to the Israeli Securities Law, consisting primarily of joint investment in trust funds, provident funds, insurance companies, banks, portfolio managers, investment advisors, members of the Tel Aviv Stock Exchange, underwriters, venture capital funds, entities with equity in excess of NIS 50 million and “qualified individuals”, each as defined in the Addendum (as it may be amended from time to time), collectively referred to as qualified investors (in each case purchasing for their own account or, where permitted under the Addendum, for the accounts of their clients who are investors listed in the Addendum). Qualified investors will be required to submit written confirmation that they fall within the scope of the Addendum, are aware of the meaning of same and agree to it.

## **United Kingdom**

This prospectus is only being distributed to, and is only directed at, persons in the United Kingdom that are

qualified investors (as defined in the Prospectus Directive) that are also (i) investment professionals falling within Article 19(5) of the Financial Services and Markets Act 2000 (Financial Promotion) Order 2005, as amended, referred to herein as the “Order”, and/or (ii) high net worth entities falling within Article 49(2)(a) to (d) of the Order and other persons to whom it may lawfully be communicated or caused to be communicated. Each such person is referred to herein as a “Relevant Person”.

This prospectus and its contents are confidential and should not be distributed, published or reproduced (in whole or in part) or disclosed by recipients to any other persons in the United Kingdom. Any person in the United Kingdom that is not a Relevant Person should not act or rely on this document or any of its contents.

Any invitation or inducement to engage in investment activity (within the meaning of Section 21 of the Financial Services and Markets Act 2000 (the “FSMA”)) may only be communicated or caused to be communicated in connection with the issue or sale of the securities in circumstances in which Section 21(1) of the FSMA does not apply. All applicable provisions of the FSMA must be complied with in respect of anything done by any person in relation to the securities in, from or otherwise involving the United Kingdom.

## **LEGAL MATTERS**

The validity of the shares of common stock offered by this prospectus supplement and the accompanying prospectus will be passed upon for us by Cooley LLP. Latham & Watkins LLP is counsel to the underwriters in connection with this offering.

## **EXPERTS**

OUM & Co. LLP, independent registered public accounting firm, has audited our consolidated financial statements as of December 31, 2017 and 2016 included in our Annual Report on Form 10-K, as set forth in their report, which is incorporated by reference in this prospectus supplement and elsewhere in the registration statement. Such financial statements are incorporated by reference in reliance on OUM & Co. LLP's report, given on their authority as experts in accounting and auditing.

## **WHERE YOU CAN FIND MORE INFORMATION**

This prospectus supplement and the accompanying prospectus are part of the registration statement on Form S-3 that was declared effective by the SEC under the Securities Act on June 14, 2017, and do not contain all the information set forth in the registration statement. Whenever a reference is made in this prospectus supplement or the accompanying prospectus to any of our contracts, agreements or other documents, the reference may not be complete and you should refer to the exhibits that are a part of the registration statement or the exhibits to the reports or other documents incorporated by reference in this prospectus supplement and the accompanying prospectus for a copy of such contract, agreement or other document. Because we are subject to the information and reporting requirements of the Exchange Act, we file annual, quarterly and current reports, proxy statements and other information with the SEC. Our SEC filings are available to the public over the Internet at the SEC's website at <http://www.sec.gov>. You may also read and copy any document we file at the SEC's Public Reference Room at 100 F Street, N.E., Washington, D.C. 20549. Please call the SEC at 1-800-SEC-0330 for further information on the operation of the Public Reference Room.

## **INCORPORATION OF CERTAIN INFORMATION BY REFERENCE**

The SEC allows us to "incorporate by reference" information from other documents that we file with them, which means that we can disclose important information to you by referring you to those documents. The information incorporated by reference is considered to be part of this prospectus supplement and the accompanying prospectus. Information

contained in this prospectus supplement and the accompanying prospectus and information that we file with the SEC in the future and incorporate by reference in this prospectus supplement and the accompanying prospectus will automatically update and supersede this information. We incorporate by reference the documents listed below and any future filings (other than Current Reports on Form 8-K furnished under Item 2.02 or Item 7.01 and exhibits filed on such form that are related to such items) we make with the SEC under Sections 13(a), 13(c), 14 or 15(d) of the Exchange Act, after the date of the prospectus supplement and before the sale of all the securities covered by this prospectus supplement (Commission File No. 001-35068):

our Annual Report on Form 10-K for the year ended December 31, 2017, which was filed on March 9, 2018;

the information specifically incorporated by reference into our Annual Report on Form 10-K for the year ended December 31, 2017 from our definitive proxy statement on Schedule 14A (other than information furnished rather than filed), which was filed with the SEC on April 23, 2018;

our Quarterly Report on Form 10-Q for the quarter ended March 31, 2018, which was filed on May 10, 2018;

our Current Reports on Form 8-K, which were filed on March 27, 2018, April 12, 2018, June 15, 2018 and July 2, 2018; and

the description of our common stock in our registration statement on Form 8-A filed with the SEC on February 1, 2011, including any amendments or reports filed for the purpose of updating such description.

We will furnish without charge to you, upon written or oral request, a copy of any or all of the documents incorporated by reference, including exhibits to these documents. Requests should be directed to: AcelRx Pharmaceuticals, Inc., Attn: Secretary, 351 Galveston Drive, Redwood City, CA 94063, telephone: (650) 216-3500.

**Prospectus**

**\$150,000,000**

**Common Stock**

**Preferred Stock**

**Debt Securities**

**Warrants**

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From time to time, we may offer and sell up to an aggregate amount of \$150,000,000 of any combination of the securities described in this prospectus, either individually or in combination. We may also offer common stock or preferred stock upon conversion of debt securities, common stock upon conversion of preferred stock, or common stock, preferred stock or debt securities upon the exercise of warrants.

We will provide the specific terms of these offerings and securities in one or more supplements to this prospectus. We may also authorize one or more free writing prospectuses to be provided to you in connection with these offerings. The prospectus supplement and any related free writing prospectus may also add, update or change information contained in this prospectus. You should carefully read this prospectus, the applicable prospectus supplement and any related free writing prospectus, as well as any documents incorporated by reference, before buying any of the securities being offered.

Our common stock is listed on the NASDAQ Global Market under the trading symbol "ACELRX." On May 31, 2017, the last reported sale price of our common stock was \$2.50 per share. The applicable prospectus supplement will contain information, where applicable, as to other listings, if any, on the NASDAQ Global Market or other securities exchange of the securities covered by the applicable prospectus supplement.

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*Investing in our securities involves a high degree of risk. You should review carefully the risks and uncertainties described under the heading “Risk Factors” on page 4 of this prospectus and any similar section contained in the applicable prospectus supplement and in any free writing prospectuses we have authorized for use in connection with a specific offering, and under similar headings in the documents that are incorporated by reference into this prospectus.*

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

The securities may be sold directly by us to investors, through agents designated from time to time or to or through underwriters or dealers, on a continuous or delayed basis. For additional information on the methods of sale, you should refer to the section entitled “Plan of Distribution” in this prospectus. If any agents or underwriters are involved in the sale of any securities with respect to which this prospectus is being delivered, the names of such agents or underwriters and any applicable fees, commissions, discounts and over-allotment options will be set forth in a prospectus supplement. The price to the public of such securities and the net proceeds we expect to receive from such sale will also be set forth in a prospectus supplement.

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

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**The date of this prospectus is June 14, 2017.**

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## **ABOUT THIS PROSPECTUS**

This prospectus is part of a registration statement on Form S-3 that we filed with the Securities and Exchange Commission, or SEC, using a “shelf” registration process. Under this shelf registration statement, we may, from time to time, offer and sell, either individually or in combination, in one or more offerings, up to a total dollar amount of \$150,000,000 of any combination of the securities described in this prospectus.

This prospectus provides you with a general description of the securities we may offer. Each time we offer securities under this prospectus, we will provide a prospectus supplement that will contain more specific information about the terms of that offering. We may also authorize one or more free writing prospectuses to be provided to you that may contain material information relating to these offerings. The prospectus supplement and any related free writing prospectus that we may authorize to be provided to you may also add, update or change any of the information contained in this prospectus or in the documents that we have incorporated by reference into this prospectus. We urge you to read carefully this prospectus, any applicable prospectus supplement and any free writing prospectuses we have authorized for use in connection with a specific offering, together with the information incorporated herein by reference as described under the heading “Incorporation of Certain Information by Reference,” before buying any of the securities being offered.

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

You should rely only on the information contained in, or incorporated by reference into, this prospectus and any applicable prospectus supplement, along with the information contained in any free writing prospectuses we have authorized for use in connection with a specific offering. We have not authorized anyone to provide you with different or additional information. You must not rely upon any information or representation not contained or incorporated by reference in this prospectus, the accompanying prospectus supplement or in any related free writing prospectus that we may authorize to be provided to you. This prospectus is an offer to sell only the securities offered hereby, but only under circumstances and in jurisdictions where it is lawful to do so.

The information appearing in this prospectus, any applicable prospectus supplement or any related free writing prospectus is accurate only as of the date on the front of the document and that any information we have incorporated by reference is accurate only as of the date of the document incorporated by reference, regardless of the time of delivery of this prospectus, any applicable prospectus supplement or any related free writing prospectus, or any sale of a security. Our business, financial condition, results of operations and prospects may have changed since those dates.

This prospectus contains and incorporates by reference market data and industry statistics and forecasts that are based on independent industry publications and other publicly available information. Although we believe that these sources are reliable, we do not guarantee the accuracy or completeness of this information and we have not independently verified this information. Although we are not aware of any misstatements regarding the market and industry data presented in this prospectus and the documents incorporated herein by reference, these estimates involve risks and uncertainties and are subject to change based on various factors, including those discussed under the heading “Risk Factors” contained in the applicable prospectus supplement and any related free writing prospectus, and under similar headings in the other documents that are incorporated by reference into this prospectus. Accordingly, investors should not place undue reliance on this information.

This prospectus contains summaries of certain provisions contained in some of the documents described herein, but reference is made to the actual documents for complete information. All of the summaries are qualified in their entirety by the actual documents. Copies of some of the documents referred to herein have been filed, will be filed or will be incorporated by reference as exhibits to the registration statement of which this prospectus is a part, and you may obtain copies of those documents as described below under the section entitled “Where You Can Find Additional Information.”

## PROSPECTUS SUMMARY

*This summary highlights selected information contained elsewhere in this prospectus or incorporated by reference in this prospectus, and does not contain all of the information that you need to consider in making your investment decision. You should carefully read the entire prospectus, the applicable prospectus supplement and any related free writing prospectus, including the risks of investing in our securities discussed under the heading “Risk Factors” contained in the applicable prospectus supplement and any related free writing prospectus, and under similar headings in the other documents that are incorporated by reference into this prospectus. You should also carefully read the information incorporated by reference into this prospectus, including our financial statements, and the exhibits to the registration statement of which this prospectus is a part.*

### **AcelRx Pharmaceuticals, Inc.**

#### **Overview**

We are a specialty pharmaceutical company focused on the development and commercialization of innovative therapies for the treatment of acute pain. Our lead product candidate, DSUVIA™ (known as ARX-04 outside of the United States), and our follow-on product candidate, ZALVISO®, utilize sublingual sufentanil, delivered via a non-invasive route of sublingual administration. We anticipate developing a distribution capability and commercial organization to market and sell DSUVIA in the United States by ourselves, and potentially, in certain European Economic Area, or EEA, countries with strategic partners. In geographies where we decide not to commercialize ourselves, we may seek to out-license commercialization rights. We intend to seek regulatory approval for ZALVISO in the United States and, if successful, potentially promote ZALVISO as a follow-on product to DSUVIA, either by ourselves or with strategic partners.

We have chosen sufentanil as the therapeutic ingredient for our current product candidates. Opioids have been utilized for pain relief for centuries and are the standard-of-care for the treatment of moderate-to-severe acute pain. Sufentanil is available as an injectable in several markets around the world and is used by anesthesiologists for induction of sedation or as an epidural; however, the injectable formulation is not suitable for the treatment of acute pain. We have created a proprietary sublingual (under the tongue) tablet formulation of sufentanil intended for the treatment of moderate-to-severe acute pain. The sublingual formulation retains the therapeutic value of sufentanil and novel delivery devices provide a non-invasive route of administration. Sufentanil is highly lipophilic which provides for rapid absorption in the mucosal tissue, or fatty cells, found under the tongue, and for rapid transit across the blood-brain barrier to reach the mu-opioid receptors in the brain. The sublingual route of delivery used by DSUVIA and ZALVISO provides a recognized onset of analgesia. The sublingual delivery system also eliminates the risk of intravenous, or IV, complications, such as catheter-related infections. In addition, because patients do not require

direct connection to an IV infusion pump, or IV line, DSUVIA and ZALVISO may allow for ease of patient mobility.

## **Corporate Information**

We were originally incorporated as SuRx, Inc. in Delaware on July 13, 2005. We subsequently changed our name to AcelRx Pharmaceuticals, Inc. on August 13, 2006. We file electronically with the SEC our annual reports on Form 10-K, quarterly reports on Form 10-Q, current reports on Form 8-K, and amendments to those reports filed or furnished pursuant to Section 13(a) or 15(d) of the Securities Exchange Act of 1934, as amended, or the Exchange Act. We make available on our website at [www.acerlx.com](http://www.acerlx.com), free of charge, copies of these reports as soon as reasonably practicable after filing these reports with, or furnishing them to, the SEC.

## The Securities We May Offer

We may offer shares of our common stock and preferred stock, various series of debt securities and/or warrants to purchase any of such securities, either individually or in combination, up to a total dollar amount of \$150,000,000, from time to time under this prospectus, together with the applicable prospectus supplement and any related free writing prospectus, at prices and on terms to be determined by market conditions at the time of any offering. We may also offer common stock, preferred stock and/or debt securities upon the exercise of warrants. This prospectus provides you with a general description of the securities we may offer. Each time we offer a type or series of securities under this prospectus, we will provide a prospectus supplement that will describe the specific amounts, prices and other important terms of the securities, including, to the extent applicable:

- designation or classification;
- aggregate principal amount or aggregate offering price;
- maturity date, if applicable;
- original issue discount, if any;
- rates and times of payment of interest or dividends, if any;
- redemption, conversion, exercise, exchange or sinking fund terms, if any;
- conversion or exchange prices or rates, if any, and, if applicable, any provisions for changes to or adjustments in the conversion or exchange prices or rates and in the securities or other property receivable upon conversion or exchange;
- ranking;
- restrictive covenants, if any;
- voting or other rights, if any; and
- material or special U.S. federal income tax considerations, if any.

The applicable prospectus supplement and any related free writing prospectus that we may authorize to be provided to you may also add, update or change any of the information contained in this prospectus or in the documents we have incorporated by reference. However, no prospectus supplement or free writing prospectus will offer a security that is not registered and described in this prospectus at the time of the effectiveness of the registration statement of which this prospectus is a part.

**THIS PROSPECTUS MAY NOT BE USED TO CONSUMMATE A SALE OF SECURITIES UNLESS IT IS ACCOMPANIED BY A PROSPECTUS SUPPLEMENT.**

We may sell the securities directly to investors or to or through agents, underwriters or dealers. We and our agents or underwriters, reserve the right to accept or reject all or part of any proposed purchase of securities. If we do offer securities to or through agents or underwriters, we will include in the applicable prospectus supplement:

the names of those agents or underwriters;  
applicable fees, discounts and commissions to be paid to them;  
details regarding over-allotment options, if any; and  
the net proceeds to us.

*Common Stock.* We may issue shares of our common stock from time to time. The holders of our common stock are entitled to one vote for each share held of record on all matters submitted to a vote of stockholders. Subject to preferences that may be applicable to any outstanding shares of preferred stock, the holders of common stock are entitled to receive ratably such dividends as may be declared by our board of directors out of legally available funds. Upon our liquidation, dissolution or winding up, holders of our common stock are entitled to share ratably in all assets remaining after payment of liabilities and the liquidation preferences of any outstanding shares of preferred stock. Holders of common stock have no preemptive rights and no right to convert their common stock into any other securities. There are no redemption or sinking fund provisions applicable to our common stock. In this prospectus, we have summarized certain general features of the common stock under “Description of Capital Stock — Common Stock.” We urge you, however, to read the applicable prospectus supplement (and any related free writing prospectus that we may authorize to be provided to you) related to any common stock being offered.

*Preferred Stock.* We may issue shares of our preferred stock from time to time, in one or more series. Our board of directors will determine the designations, voting powers, preferences and rights of the preferred stock, as well as the qualifications, limitations or restrictions thereof, including dividend rights, conversion rights, preemptive rights, terms of redemption or repurchase, liquidation preferences, sinking fund terms and the number of shares constituting any series or the designation of any series. Convertible preferred stock will be convertible into our common stock or exchangeable for other securities. Conversion may be mandatory or at your option and would be at prescribed conversion rates.



If we sell any series of preferred stock under this prospectus, we will fix the designations, voting powers, preferences and rights of the preferred stock of each series we issue under this prospectus, as well as the qualifications, limitations or restrictions thereof, in the certificate of designation relating to that series. We will file as an exhibit to the registration statement of which this prospectus is a part, or will incorporate by reference from reports that we file with the SEC, the form of any certificate of designation that contains the terms of the series of preferred stock we are offering. In this prospectus, we have summarized certain general features of the preferred stock under “Description of Capital Stock — Preferred Stock.” We urge you, however, to read the applicable prospectus supplement (and any related free writing prospectus that we may authorize to be provided to you) related to the series of preferred stock being offered, as well as the complete certificate of designation that contains the terms of the applicable series of preferred stock.

*Debt Securities.* We may issue debt securities from time to time, in one or more series, as either senior or subordinated debt or as senior or subordinated convertible debt. The senior debt securities will rank equally with any other unsecured and unsubordinated debt. The subordinated debt securities will be subordinate and junior in right of payment, to the extent and in the manner described in the instrument governing the debt, to all of our senior indebtedness. Convertible debt securities will be convertible into or exchangeable for our common stock or other securities. Conversion may be mandatory or at your option and would be at prescribed converts