UNITED STATES SECURITIES AND EXCHANGE COMMISSION

Washington, D.C. 20549

FORM S-3 REGISTRATION STATEMENT

UNDER
THE SECURITIES ACT OF 1933

eFFECTOR THERAPEUTICS, INC.

(Exact Name of Registrant as Specified in Its Charter)

Delaware (State or other jurisdiction of incorporation or organization)

Large accelerated filer

Non-accelerated filer

 \times

142 North Cedros Avenue, Suite B Solana Beach, California 92075 (858) 925-8215 (Address of Principal Executive Offices including Zip Code)

85-3306396 (I.R.S. Employer Identification No.)

Accelerated filer

Smaller reporting company

Emerging growth company

 \boxtimes

 \boxtimes

Stephen T. Worland, Ph.D. Chief Executive Officer eFFECTOR Therapeutics, Inc. 142 North Cedros Avenue, Suite B Solana Beach, California 92075 (858) 925-8215

(Name, address, including zip code, and telephone number, including area code, of agent for service)

Copies to:
Cheston J. Larson
Matthew T. Bush
Latham & Watkins LLP
12670 High Bluff Drive
San Diego, CA 92130
(858) 523-5400

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APPROXIMATE DATE OF COMMENCEMENT OF PROPOSED SALE TO THE PUBLIC: From time to time after the effective date of this registration tatement.
f the only securities being registered on this Form are being offered pursuant to dividend or interest reinvestment plans, please check the following box. $\ \Box$
f any of the securities being registered on this Form are to be offered on a delayed or continuous basis pursuant to Rule 415 under the Securities Act of 1933, other than ecurities offered only in connection with dividend or interest reinvestment plans, check the following box.
f this Form is filed to register additional securities for an offering pursuant to Rule 462(b) under the Securities Act, please check the following box and list the Securities Act registration statement number of the earlier effective registration statement for the same offering.
f this Form is a post-effective amendment filed pursuant to Rule 462(c) under the Securities Act, check the following box and list the Securities Act registration tatement number of the earlier effective registration statement for the same offering.
f this Form is a registration statement pursuant to General Instruction I.D. or a post-effective amendment thereto that shall become effective upon filing with the Commission pursuant to Rule 462(e) under the Securities Act, check the following box.
f this Form is a post-effective amendment to a registration statement filed pursuant to General Instruction I.D. filed to register additional securities or additional classes of securities pursuant to Rule 413(b) under the Securities Act, check the following box.
ndicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, 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.

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 7(a)(2)(B) of Securities Act. \Box

The registrant hereby amends this registration statement on such date or dates as may be necessary to delay its effective date until the registrant shall file a further amendment which specifically states that this registration statement shall thereafter become effective in accordance with Section 8(a) of the Securities Act of 1933, as amended, or until the registration statement shall become effective on such date as the Commission, acting pursuant to said Section 8(a), may determine.

The information in this preliminary prospectus is not complete and may be changed. These securities may not be sold until the registration statement filed with the Securities and Exchange Commission is effective. This preliminary prospectus is not an offer to sell nor does it seek an offer to buy these securities in any jurisdiction where the offer or sale is not permitted.

Subject to Completion, dated June 16, 2023.

PROSPECTUS



20,559,865 Shares of Common Stock

Issuable Upon Exercise of Outstanding Warrants

This prospectus relates to the resale from time to time, by the selling securityholders (which term as used in this prospectus includes their transferees, pledgees, distributees, donees and successors-in-interest) identified in this prospectus under the caption "Selling Securityholders," of up to 20,559,865 shares of our common stock, par value \$0.0001 per share, that they may acquire upon the exercise of outstanding warrants, which we refer to as the "Warrants." We issued the Warrants to the selling securityholders in two private placements that occurred concurrently (the "Private Placements") with two registered direct offerings (the "Registered Offerings") of an aggregate of 10,650,000 shares of our common stock, and pre-funded warrants ("Pre-Funded Warrants") to purchase an aggregate 8,564,827 shares of our common stock, which were completed on May 31, 2023 and June 8, 2023, respectively. In connection with the Registered Offerings, we also issued H.C. Wainwright & Co., LLC (the "Placement Agent") or its designees Warrants to purchase shares of our common stock.

The selling securityholders may, from time to time, offer, sell or distribute all or a portion of the securities hereby registered publicly or through private transactions at prevailing market prices or at negotiated prices. See "Plan of Distribution" in this prospectus for more information. We will not receive any proceeds from the resale or other disposition of the shares of common stock by the selling securityholders. However, we will receive the proceeds of any cash exercise of the Warrants.

Each time any of the selling securityholders offers and sells securities, such selling securityholders may provide a supplement to this prospectus that contains specific information about the offering and the amounts, prices and terms of the securities. The supplement may also add, update or change information contained in this prospectus with respect to that offering. You should carefully read this prospectus and any applicable prospectus supplement, together with the documents we incorporate by reference, before you invest in any of our securities.

We are an emerging growth company as that term is used in the Jumpstart Our Business Startups Act of 2012 and a smaller reporting company as defined under Rule 405 of the Securities Act of 1933, as amended (the "Securities Act"), and, as such, are subject to certain reduced public company reporting requirements.

INVESTING IN OUR SECURITIES INVOLVES RISKS. SEE THE "RISK FACTORS" ON PAGE 5 OF THIS PROSPECTUS AND ANY SIMILAR SECTION CONTAINED IN THE APPLICABLE PROSPECTUS SUPPLEMENT CONCERNING FACTORS YOU SHOULD CONSIDER BEFORE INVESTING IN OUR SECURITIES.

Our common stock and warrants are listed on the Nasdaq Capital Market under the symbols "EFTR" and "EFTRW," respectively. On June 15, 2023, the closing price of our common stock was \$0.935 per share and the closing price of our warrants was \$0.152 per warrant.

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

The date of this prospectus is , 2023.

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ABOUT THIS PROSPECTUS

This prospectus is part of a registration statement that we filed with the U.S. Securities and Exchange Commission ("SEC") using a "shelf" registration process. By using a shelf registration statement, the selling securityholders may sell up to 20,559,865 shares of common stock from time to time and in one or more offerings as described in this prospectus. In connection with the offer and sale of securities by the selling securityholders, the selling securityholders may provide a prospectus supplement to this prospectus that contains specific information about the securities being offered and sold and the specific 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. Any such prospectus supplement or free writing prospectus may also add, update or change information contained or incorporated by reference in this prospectus with respect to that offering. If there is any inconsistency between the information in this prospectus and the applicable prospectus supplement or free writing prospectus, you should rely on the prospectus supplement or free writing prospectus, as applicable. Before purchasing any securities, you should carefully read both this prospectus and the applicable prospectus supplement (and any applicable free writing prospectuses), together with the additional information described under the heading "Where You Can Find More Information; Incorporation by Reference."

Neither we, nor the selling securityholders, have authorized anyone to provide you with any information or to make any representations other than those contained or incorporated by reference in this prospectus, any applicable prospectus supplement or any free writing prospectuses prepared by or on behalf of us or to which we have referred you. We and the selling securityholders take no responsibility for, and can provide no assurance as to the reliability of, any other information that others may give you. We and the selling securityholders will not make an offer to sell these securities in any jurisdiction where the offer or sale is not permitted. You should assume that the information appearing in this prospectus and any applicable prospectus supplement to this prospectus is accurate only as of the date on its respective cover, that the information appearing in any applicable free writing prospectus is accurate only as of the date of that free writing prospectus, and that any information incorporated by reference is accurate only as of the date of the document incorporated by reference, unless we indicate otherwise. Our business, financial condition, results of operations and prospects may have changed since those dates. This prospectus incorporates by reference, and any prospectus supplement or free writing prospectus may contain and incorporate by reference, market data and industry statistics and forecasts that are based on independent industry publications and other publicly available information. Although we believe these sources are reliable, we do not guarantee the accuracy or completeness of this information and we have not independently verified this information. In addition, the market and industry data and forecasts that may be included or incorporated by reference in this prospectus, any prospectus supplement or any applicable free writing prospectus, may involve estimates, assumptions, and other risks and uncertainties and are subject to change based on various factors, including those discussed under the heading "Risk Factors" contained in this prospectus, any applicable prospectus supplement and any applicable free writing prospectus, and under similar headings in other documents that are incorporated by reference into this prospectus. Accordingly, investors should not place undue reliance on this information.

When we refer to "eFFECTOR," "we," "our," "us" and the "Company" in this prospectus, we mean eFFECTOR Therapeutics, Inc., including our consolidated subsidiary, unless otherwise specified.

We use our trademarks in this prospectus as well as trademarks, tradenames and service marks that are the property of other organizations. Solely for convenience, trademarks and tradenames referred to in this prospectus appear without the $^{\circledR}$ symbols, but those references are not intended to indicate, in any way, that we will not assert, to the fullest extent under applicable law, our rights or that the applicable owner will not assert its rights, to these trademarks and tradenames.

WHERE YOU CAN FIND MORE INFORMATION: INCORPORATION BY REFERENCE

Available Information

We file reports, proxy statements and other information with the SEC. The SEC maintains a website that contains reports, proxy and information statements and other information about issuers, including us, who file electronically with the SEC. The address of that website is http://www.sec.gov.

Our website address is www.effector.com. The information on our website, however, is not, and should not be deemed to be, a part of this prospectus.

This prospectus and any prospectus supplement are part of a registration statement that we filed with the SEC and do not contain all of the information in the registration statement. The full registration statement may be obtained from the SEC or us, as provided below. Forms of the indenture and other documents establishing the terms of the offered securities are or may be filed as exhibits to the registration statement or documents incorporated by reference in the registration statement. Statements in this prospectus or any prospectus supplement about these documents are summaries and each statement is qualified in all respects by reference to the document to which it refers. You should refer to the actual documents for a more complete description of the relevant matters. You may inspect a copy of the registration statement through the SEC's website, as provided above.

Incorporation by Reference

The SEC's rules allow us to "incorporate by reference" information into this prospectus, which means that we can disclose important information to you by referring you to another document filed separately with the SEC. The information incorporated by reference is deemed to be part of this prospectus, and subsequent information that we file with the SEC will automatically update and supersede that information. Any statement contained in this prospectus or a previously filed document incorporated by reference will be deemed to be modified or superseded for purposes of this prospectus to the extent that a statement contained in this prospectus or a subsequently filed document incorporated by reference modifies or replaces that statement.

This prospectus and any accompanying prospectus supplement incorporate by reference the documents set forth below that have previously been filed with the SEC:

- our Annual Report on Form 10-K for the year ended December 31, 2022, filed with the SEC on March 8, 2023;
- the information specifically incorporated by reference into our Annual Report on Form 10-K from our Definitive Proxy Statement on Schedule 14A, filed with the SEC on May 12, 2023;
- our Quarterly Report on Form 10-Q for the quarter ended March 31, 2023 filed with the SEC on May 9, 2023;
- our Current Reports on Form 8-K filed with the SEC on <u>January 5, 2023</u>, <u>February 21, 2023</u>, <u>March 6, 2023</u>, <u>May 19, 2023</u>, <u>May 25, 2023</u>, <u>May 30, 2023</u> and <u>June 8, 2023</u>; and
- the description of our common stock contained in the registration statement on <u>Form 8-A</u>, filed with the SEC on January 7, 2021, and any amendment or report filed with the SEC for the purpose of updating the description.

All reports and other documents we subsequently file pursuant to Section 13(a), 13(c), 14 or 15(d) of the Securities Exchange Act of 1934, as amended (the "Exchange Act"), prior to the termination of this offering, including all such documents we may file with the SEC after the date of the initial registration statement and prior to the effectiveness of the registration statement, but excluding any information furnished to, rather than filed with, the SEC, will also be incorporated by reference into this prospectus and deemed to be part of this prospectus from the date of the filing of such reports and documents.

You may request a free copy of any of the documents incorporated by reference in this prospectus (other than exhibits, unless they are specifically incorporated by reference in the documents) by writing or telephoning us at the following address:

eFFECTOR Therapeutics, Inc. Attention: Corporate Secretary 142 North Cedros Avenue, Suite B Solana Beach, California 92075 (858) 925-8215

Exhibits to the filings will not be sent, however, unless those exhibits have specifically been incorporated by reference in this prospectus or any accompanying prospectus supplement.

THE COMPANY

We are a clinical-stage biopharmaceutical company focused on pioneering the development of a new class of oncology drugs we refer to as STRIs. Translation is the process in cells whereby the synthesis of proteins is directed by information contained in genetic sequences. We utilized our proprietary selective translation regulation technology platform to internally discover a portfolio of small molecule STRI product candidates. Our product candidates target the eIF4F complex and its activating kinase, mitogen-activated protein kinase interacting kinase ("MNK"). The eIF4F complex is a central node where two of the most frequently mutated signaling pathways in cancer, the PI3K-AKT and RAS-MEK pathways, converge to activate the translation of select mRNA into proteins that are frequent culprits in key disease-driving processes. Inhibition of any one of these targets simultaneously downregulates multiple disease-driving proteins before they are synthesized. Each of our product candidates is designed to act on a single protein that drives the expression of a network of multiple functionally related proteins, including oncoproteins, which are proteins whose aberrant function can cause cancer, immunosuppressive proteins in T cells and proteins known to drive drug resistance that together control tumor growth, survival and immune evasion.

We were incorporated under the laws of the state of Delaware on October 2, 2020 under the name Locust Walk Acquisition Corp. eFFECTOR Therapeutics, Inc. was incorporated under the laws of the state of Delaware on May 1, 2012. On August 25, 2021, we consummated a merger pursuant to that certain Merger Agreement, dated as of May 26, 2021, pursuant to which a wholly-owned subsidiary of Locust Walk Acquisition Corp. merged with and into eFFECTOR Therapeutics Operations, Inc. (formerly known as eFFECTOR Therapeutics, Inc.), with eFFECTOR Therapeutics Operations, Inc. becoming our wholly-owned subsidiary. Upon the closing of the merger, we changed our name to eFFECTOR Therapeutics, Inc. Our principal executive offices are located at 142 North Cedros Avenue, Suite B, Solana Beach, California 92075, and our telephone number is (858) 925-8215.

RISK FACTORS

Investment in any securities offered pursuant to this prospectus and any applicable prospectus supplement involves risks. You should carefully consider the risk factors incorporated by reference to our most recent Annual Report on Form 10-K, our most recent Quarterly Report on Form 10-Q, and any subsequent Quarterly Reports on Form 10-Q or Current Reports on Form 8-K we file after the date of this prospectus, and all other information contained in or incorporated by reference into this prospectus, as updated by our subsequent filings under the Exchange Act, and the risk factors and other information contained in any applicable prospectus supplement and any applicable free writing prospectus before acquiring any of such securities. The occurrence of any of these risks might cause you to lose all or part of your investment in the offered securities.

CAUTIONARY NOTE REGARDING FORWARD-LOOKING STATEMENTS

This prospectus and the documents incorporated by reference herein contain forward-looking statements within the meaning of Section 27A of the Securities Act and Section 21E of the Exchange Act. All statements other than statements of historical facts contained in this prospectus and the documents incorporated by reference herein, including statements regarding our future results of operations or financial condition, research and development plans, the anticipated timing, costs, design and conduct of our ongoing and planned preclinical studies and clinical trials for our product candidates, the timing and likelihood of regulatory filings and approvals for our product candidates, our ability to commercialize our product candidates, if approved, pricing and reimbursement of our product candidates, if approved, the potential to develop future product candidates, the potential benefits of strategic collaborations, the timing and likelihood of success, plans and objectives of management for future operations, and future results of anticipated product development efforts, are forward-looking statements. These statements involve known and unknown risks, uncertainties and other important factors that may cause our actual results, performance or achievements to be materially different from any future results, performance or achievements expressed or implied by the forward-looking statements. This prospectus and the documents incorporated by reference herein also contain estimates and other statistical data made by independent parties and by us relating to market size and growth and other data about our industry. This data involves a number of assumptions and limitations, and you are cautioned not to give undue weight to such estimates. In addition, projections, assumptions and estimates of our future performance and the future performance of the markets in which we operate are necessarily subject to a high degree of uncertainty and risk.

In some cases, you can identify forward-looking statements by terms such as "may," "will," "would," "could," "should," "expect," "plan," "anticipate," "could," "intend," "target," "project," "contemplates," "believes," "estimates," "predicts," "potential" or "continue" or the negative of these terms or other similar expressions. The forward-looking statements in this prospectus and the documents incorporated by reference herein are only predictions. We have based these forward-looking statements largely on our current expectations and projections about future events and financial trends that we believe may affect our business, financial condition and results of operations. These forward-looking statements speak only as of the date of this prospectus and are subject to a number of risks, uncertainties and assumptions, which we discuss in greater detail in the documents incorporated by reference herein, including under the heading "Risk Factors" and elsewhere in this prospectus. The events and circumstances reflected in our forward-looking statements may not be achieved or occur and actual results could differ materially from those projected in the forward-looking statements. Moreover, we operate in an evolving environment. New risk factors and uncertainties may emerge from time to time, and it is not possible for management to predict all risk factors and uncertainties. Given these risks and uncertainties, you should not place undue reliance on these forward-looking statements. Except as required by applicable law, we do not plan to publicly update or revise any forward-looking statements contained in this prospectus or the documents incorporated by reference herein, whether as a result of any new information, future events, changed circumstances or otherwise. For all forward-looking statements, we claim the protection of the safe harbor for forward-looking statements contained in the Private Securities Litigation Reform Act of 1995.

USE OF PROCEEDS

We will not receive any of the proceeds from the sale of common stock being offered by any of the selling securityholders.

We will receive proceeds from the exercise of the Warrants for cash, if any, but not from the sale of the shares of common stock issuable upon such exercise. Unless otherwise disclosed in a prospectus supplement, we intend to use any net proceeds from the exercise of Warrants for cash for general corporate and working capital purposes, including funding our research and development.

DESCRIPTION OF SECURITIES

The following summary describes our securities and the material provisions of our amended and restated certificate of incorporation and our amended and restated bylaws, and of the Delaware General Corporation Law (the "DGCL"). Because the following is only a summary, it does not contain all of the information that may be important to you. For a complete description, you should refer to our amended and restated certificate of incorporation and amended and restated bylaws, copies of which have been filed as exhibits to the registration statement of which this prospectus is part.

The description of our securities is incorporated by reference to Exhibit 4.2 to our Annual Report on Form 10-K for the fiscal year ended December 31, 2022, filed with the SEC on March 8, 2023.

Warrants

The Warrants were issued in the Private Placements on May 31, 2023 and June 8, 2023, respectively, in connection with the Registered Offerings of shares of our common stock and Pre-Funded Warrants to purchase shares of our common stock. In connection with the Registered Offerings, we also issued the Placement Agent or its designees warrants to purchase shares of common stock (the "Placement Agent Warrants"). The number of Warrants issued to the selling securityholders in the Private Placements was as follows:

- Warrants to purchase up to an aggregate 11,450,382 shares of our common stock at an exercise price of \$0.53 per share were issued on May 31, 2023 to the investor who purchased shares of our common stock pursuant to a Securities Purchase Agreement dated May 26, 2023 between us and the investor named therein;
- Warrants to purchase up to 801,527 shares of our common stock at an exercise price of \$0.8188 per share were issued on May 31, 2023 as partial compensation to the Placement Agent for the Registered Offering;
- Warrants to purchase up to an aggregate 7,764,445 shares of our common stock at an exercise price of \$1.00 per share were issued on June 8, 2023 to the investor who purchased shares of our common stock pursuant a Securities Purchase Agreement dated June 6, 2023 between us and the investor named therein; and
- Warrants to purchase up to 543,511 shares of our common stock at an exercise price of \$1.4063 per share were issued on June 8, 2023 as partial compensation to the Placement Agent for the Registered Offering.

Exercisability

The Warrants became exercisable immediately following issuance. The Warrants, except for the Placement Agent Warrants, have a term of five and one-half years from the initial exercise date. The Placement Agent Warrants have a term of five years from the initial exercise date. The Warrants are exercisable, at the option of the holder, in whole or in part by delivering to us a duly executed exercise notice and, at any time a registration statement registering the issuance of shares of common stock underlying the Warrants under the Securities Act is effective and available for the issuance of such shares, or an exemption from registration under the Securities Act is available for the issuance of such shares, by payment in full in immediately available funds for the number of shares of common stock purchased upon such exercise.

Cashless Exercise

If at the time of exercise there is no effective registration statement registering, or the prospectus contained therein is not available for the issuance of the shares of common stock underlying the Warrants, then the Warrants may also be exercised, in whole or in part, at such time by means of a cashless exercise, in which case

the holder would receive upon such exercise the net number of shares of common stock determined according to the formula set forth in the warrant.

Exercise Limitation

A holder does not have the right to exercise any portion of the Warrants if the holder (together with its affiliates) would beneficially own in excess of 4.99% (or, upon election of the holder, 9.99%) of the number of our shares of common stock outstanding immediately after giving effect to the exercise, as such percentage ownership is determined in accordance with the terms of the Warrants. However, any holder may increase or decrease such percentage, but in no event may such percentage be increased to more than 9.99%, provided that any increase will not be effective until the 61st day after such election.

Exercise Price Adjustment

The exercise price of the Warrants is subject to appropriate adjustment in the event of certain stock dividends and distributions, stock splits, stock combinations, reclassifications or similar events affecting our shares of common stock.

Transferability

Subject to applicable laws, the Warrants may be offered for sale, sold, transferred or assigned without our consent.

Exchange Listing

There is no established trading market for the Warrants, and we do not expect a market to develop. In addition, we do not intend to apply for the listing of the Warrants on any national securities exchange or other trading market.

Fundamental Transactions

In the event of any fundamental transaction, as described in the Warrants and generally including any merger with or into another entity, sale of all or substantially all of our assets, tender offer or exchange offer, or reclassification of our shares of common stock, then upon any subsequent exercise of a Warrant, the holder will have the right to receive as alternative consideration, for each share of common stock that would have been issuable upon such exercise immediately prior to the occurrence of such fundamental transaction, the number of shares of common stock of the successor or acquiring corporation of our company, if it is the surviving corporation, and any additional consideration receivable upon or as a result of such transaction by a holder of the number of shares of common stock for which the Warrant is exercisable immediately prior to such event.

Notwithstanding the foregoing, in the event of a fundamental transaction, we or a successor entity shall, at the holder's option, exercisable at any time concurrently or within thirty (30) days following the consummation of a fundamental transaction, purchase the Warrant by paying to the holder an amount equal to the Black Scholes Value (as defined in each Warrant) of the remaining unexercised portion of the Warrant on the date of the fundamental transaction. If the fundamental transaction is not within our control, the holders of the Warrants will only be entitled to receive from us or a successor entity the same type or form of consideration (and in the same proportion), at the Black Scholes Value of the unexercised portion of the Purchase Warrant, that is being offered and paid to the holders of our common stock in connection with the fundamental transaction, whether that consideration is in the form of cash, stock or any combination thereof, or whether the holders of our common stock are given the choice to receive alternative forms of consideration in connection with the fundamental transaction.

Rights as a Stockholder

Except as otherwise provided in the Warrants or by virtue of such holder's ownership of our common stock, the holder of a Warrant will not have the rights or privileges of a holder of our common stock, including any voting rights, until the holder exercises the Warrant.

SELLING SECURITYHOLDERS

This prospectus relates to the possible resale by certain of the selling securityholders from time to time of up to an aggregate of 20,559,865 shares of common stock issuable upon the exercise of the outstanding Warrants. The term "selling securityholders" includes donees, pledgees, transferees, assignees or other successors in interest selling securities received after the date of this prospectus from a selling securityholder as a gift, pledge, partnership distribution or other transfer.

The selling securityholders originally acquired the Warrants to purchase the shares of common stock included in this prospectus in the Private Placements which closed on May 31, 2023 and June 8, 2023, respectively, as described elsewhere in this prospectus.

The following table sets forth information concerning the shares of common stock that may be offered from time to time by each selling securityholder. The number of shares beneficially owned by each selling securityholder is determined under rules issued by the SEC. Under these rules, beneficial ownership includes any shares as to which the selling securityholder has sole or shared voting power or investment power. Percentage ownership is based on 61,765,616 shares of common stock outstanding as of June 15, 2023. In computing the number of shares beneficially owned by a selling securityholder and their percentage ownership, shares of common stock subject to options, warrants or other rights held by such selling securityholder that are currently exercisable or will become exercisable within 60 days of June 15, 2023 are considered outstanding, although these shares are not considered outstanding for purposes of computing the percentage ownership of any other selling securityholder. For purposes of this table, we have assumed that the selling securityholders will have sold all of the securities covered by this prospectus upon the completion of the offering (including all shares of common stock issuable upon exercise of the Warrants). Each of the selling securityholders listed has sole voting and investment power with respect to the shares beneficially owned by the selling securityholder unless noted otherwise.

The information in the following table has been provided to us by or on behalf of the selling securityholders and the selling securityholders may have sold, transferred or otherwise disposed of all or a portion of their securities after the date on which they provided us with information regarding their securities. A selling securityholder may sell all, some or none of its securities in this offering. See the section titled "Plan of Distribution."

	Common Stock Beneficially Owned Before this Offering		Maximum Number of Shares of Common Stock to be Sold Pursuant to this Prospectus	Common Stock Beneficially Owned Upon Completion of this Offering	
Selling Securityholder	Number	Percentage	Number	Number	Percentage
Sabby Volatility Warrant Master Fund, Ltd.(1)	3,179,700	4.99%	19,214,827	1,224,502	1.5%
Michael Vasinkevich ⁽²⁾	862,505	1.4%	862,505	_	— %
Noam Rubinstein ⁽²⁾	423,687	*	423,687	_	— %
Craig Schwabe ⁽²⁾	45,396	*	45,396	_	— %
Charles Worthman ⁽²⁾	13,450	*	13,450	_	— %

^{*} Less than 1%.

⁽¹⁾ The number of shares beneficially owned prior to this offering consists of (i) 1,224,502 shares of common stock and (ii) 1,955,198 shares of common stock issuable upon exercise of warrants and excludes 17,259,629 shares issuable upon exercise of warrants after giving effect to the 4.99% beneficial ownership limitation described in "Description of Securities—Warrants—Exercise Limitation". The maximum number of shares to be sold includes all shares of common stock issuable upon exercise of warrants without giving effect to such beneficial ownership limitation. Sabby Management, LLC is the investment manager of Sabby Volatility Warrant Master Fund, Ltd. and shares voting and investment power with respect to these

- shares in this capacity. As manager of Sabby Management, LLC, Hal Mintz also shares voting and investment power on behalf of Sabby Volatility Warrant Master Fund, Ltd. Each of Sabby Management, LLC and Hal Mintz disclaims beneficial ownership over the securities listed except to the extent of their pecuniary interest therein.
- (2) Each of the selling stockholders is affiliated with H.C. Wainwright & Co., LLC, a registered broker dealer with a registered address of H.C. Wainwright & Co., LLC, 430 Park Ave, 3rd Floor, New York, NY 10022, and has sole voting and dispositive power over the securities held. The number of shares beneficially owned prior to this offering consist of shares of common stock issuable upon exercise of placement agent warrants, which were received as compensation in connection with the Registered Offerings. The selling stockholder acquired the placement agent warrants in the ordinary course of business and, at the time the placement agent warrants were acquired, the selling stockholder had no agreement or understanding, directly or indirectly, with any person to distribute such securities.

PLAN OF DISTRIBUTION

We are registering the shares of common stock issued, or issuable upon exercise of the warrants, to the selling securityholders to permit the resale of such shares of common stock by the holder of such shares of common stock from time to time after the date of this prospectus. The selling securityholders may from time to time offer some or all of the shares of common stock covered by this prospectus. To the extent required, this prospectus may be amended and supplemented from time to time to describe a specific plan of distribution. The selling securityholders will not pay any of the costs, expenses and fees in connection with the registration of the shares covered by this prospectus, but they will pay any and all underwriting discounts, selling commissions and similar charges attributable to sales of the shares. We will not receive any proceeds from the sale of the shares of our common stock covered hereby. The selling securityholders may sell some or all of the shares of common stock covered by this prospectus, "selling securityholders" includes donees, pledgees, transferees, assignees or other successors in interest selling securities received from a selling securityholder as a gift, pledge, partnership distribution, assignment or other transfer. The selling securityholders will act independently of us in making decisions with respect to the timing, manner and size of each sale. Such sales may be made on one or more exchanges or in the over-the-counter market or otherwise, at prices and under terms then prevailing or at prices related to the then-current market price or in negotiated transactions. The selling securityholders may dispose of their shares by one or more of, or a combination of, the following methods:

- distributions to members, partners, stockholders or other equityholders of the selling securityholders;
- purchases by a broker-dealer as principal and resale by such broker-dealer for its own account pursuant to this prospectus;
- ordinary brokerage transactions and transactions in which the broker solicits purchasers;
- block trades in which the broker-dealer so engaged will attempt to sell the shares as agent but may position and resell a portion of the block as principal to facilitate the transaction;
- an over-the-counter distribution in accordance with the rules of Nasdaq;
- through trading plans entered into by a selling securityholder pursuant to Rule 10b5-1 under the Exchange Act, that are in place at the time of an offering pursuant to this prospectus and any applicable prospectus supplement hereto that provide for periodic sales of their securities on the basis of parameters described in such trading plans;
- to or through underwriters or broker-dealers;
- in "at the market" offerings, as defined in Rule 415 under the Securities Act, at negotiated prices, at prices prevailing at the time of sale or at prices related to such prevailing market prices, including sales made directly on a national securities exchange or sales made through a market maker other than on an exchange or other similar offerings through sales agents;
- in privately negotiated transactions;
- in options transactions;
- through a combination of any of the above methods of sale; or
- any other method permitted pursuant to applicable law.

In addition, any shares that qualify for sale pursuant to Rule 144 under the Securities Act ("Rule 144") may be sold under Rule 144 rather than pursuant to this prospectus. A selling securityholder that is an entity may elect to make an in-kind distribution of common stock to its members, partners, stockholders or other equityholders pursuant to the registration statement of which this prospectus forms a part by delivering a prospectus. To the extent that such members, partners, stockholders or other equityholders are not affiliates of ours, such members,

partners, stockholders or other equityholders would thereby receive freely tradable shares of common stock pursuant to a distribution pursuant to the registration statement of which this prospectus forms a part.

To the extent required, this prospectus may be amended or supplemented from time to time to describe a specific plan of distribution. In connection with distributions of the shares or otherwise, the selling securityholders may enter into hedging transactions with broker-dealers or other financial institutions. In connection with such transactions, broker-dealers or other financial institutions may engage in short sales of shares of common stock in the course of hedging the positions they assume with selling securityholders. The selling securityholders may also sell shares of common stock short and redeliver the shares to close out such short positions. The selling securityholders may also enter into option or other transactions with broker-dealers or other financial institutions that require the delivery to such broker-dealer or other financial institution of shares offered by this prospectus, which shares such broker-dealer or other financial institution may resell pursuant to this prospectus (as supplemented or amended to reflect such transaction). The selling securityholders may also pledge shares to a broker-dealer or other financial institution, and, upon a default, such broker-dealer or other financial institution, may effect sales of the pledged shares pursuant to this prospectus (as supplemented or amended to reflect such transaction).

A selling securityholder may enter into derivative transactions with third parties, or sell securities not covered by this prospectus to third parties in privately negotiated transactions. If the applicable prospectus supplement indicates, in connection with those derivatives, the third parties may sell securities covered by this prospectus and the applicable prospectus supplement, including in short sale transactions. If so, the third party may use securities pledged by any selling securityholder or borrowed from any selling securityholder or others to settle those sales or to close out any related open borrowings of stock, and may use securities received from any selling securityholder in settlement of those derivatives to close out any related open borrowings of stock. The third party in such sale transactions will be an underwriter and will be identified in the applicable prospectus supplement (or a post-effective amendment). In addition, any selling securityholder may otherwise loan or pledge securities to a financial institution or other third party that in turn may sell the securities short using this prospectus. Such financial institution or other third party may transfer its economic short position to investors in our securities or in connection with a concurrent offering of other securities.

In effecting sales, broker-dealers or agents engaged by the selling securityholders may arrange for other broker-dealers to participate. Broker-dealers or agents may receive commissions, discounts or concessions from the selling securityholders in amounts to be negotiated immediately prior to the sale.

In offering the shares covered by this prospectus, the selling securityholders and any broker-dealers who execute sales for the selling securityholders may be deemed to be "underwriters" within the meaning of the Securities Act in connection with such sales. Any profits realized by the selling securityholders and the compensation of any broker-dealer may be deemed to be underwriting discounts and commissions.

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

We have advised the selling securityholders that the anti-manipulation rules of Regulation M under the Exchange Act may apply to sales of shares in the market and to the activities of the selling securityholders and their affiliates. In addition, we will make copies of this prospectus available to the selling securityholders for the purpose of satisfying the prospectus delivery requirements of the Securities Act. We have agreed to indemnify the selling securityholders against certain liabilities, including liabilities under the Securities Act, relating to the registration of the shares offered by this prospectus. The selling securityholders may indemnify any broker-dealer that participates in transactions involving the sale of the shares against certain liabilities, including liabilities under the Securities Act.

At the time a particular offer of shares is made, if required, a prospectus supplement will be distributed that will set forth the number of shares being offered and the terms of the offering, including the name of any underwriter, dealer or agent, the purchase price paid by any underwriter, any discount, commission and other item constituting compensation, any discount, commission or concession allowed or reallowed or paid to any dealer, and the proposed selling price to the public.

LEGAL MATTERS

The validity of the issuance of the securities offered hereby will be passed upon for us by Latham & Watkins LLP, San Diego, California.

EXPERTS

Ernst & Young LLP, independent registered public accounting firm, has audited our consolidated financial statements included in our Annual Report on Form 10-K for the year ended December 31, 2022, as set forth in their report thereon (which contains an explanatory paragraph describing conditions that raise substantial doubt about the Company's ability to continue as a going concern as described in Note 1 to the consolidated financial statements), which is incorporated by reference in this prospectus and elsewhere in the registration statement. Our financial statements are incorporated by reference in reliance on Ernst & Young LLP's report, given on their authority as experts in accounting and auditing.

PART II

INFORMATION NOT REQUIRED IN PROSPECTUS

Item 14. Other Expenses of Issuance and Distribution

The following is an estimate of the expenses (all of which are to be paid by the registrant) that we may incur in connection with the securities being registered hereby. Each item listed is estimated, except for the SEC registration fee and Financial Industry Regulatory Authority, Inc. (FINRA) filing fee.

SEC registration fee	\$ 2,300
Printing expenses	\$ 5,000
Legal fees and expenses	\$ 25,000
Accounting fees and expenses	\$ 10,000
Total	\$ 42,300

Item 15. Indemnification of Directors and Officers

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

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

Our amended and restated bylaws provide that we will indemnify each person who was or is a party or threatened to be made a party to any threatened, pending or completed action, suit or proceeding (other than an action by or in the right of us) by reason of the fact that he or she is or was, or has agreed to become, a director or officer, or is or was serving, or has agreed to serve, at our request as a director, officer, partner, employee or trustee of, or in a similar capacity with, another corporation, partnership, joint venture, trust or other enterprise (all such persons being referred to as an Indemnitee), or by reason of any action alleged to have been taken or omitted in such capacity, against all expenses (including attorneys' fees), judgments, fines and amounts paid in settlement actually and reasonably incurred in connection with such action, suit or proceeding and any appeal therefrom, if

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

Notwithstanding the foregoing, to the extent that any Indemnitee has been successful, on the merits or otherwise, he or she will be indemnified by us against all expenses (including attorneys' fees) actually and reasonably incurred in connection therewith. Expenses must be advanced to an Indemnitee under certain circumstances.

We have entered into indemnification agreements with each of our directors and officers. These indemnification agreements may require us, among other things, to indemnify our directors and officers for some expenses, including attorneys' fees, judgments, fines and settlement amounts incurred by a director or officer in any action or proceeding arising out of his or her service as one of our directors or officers, or any of our subsidiaries or any other company or enterprise to which the person provides services at our request.

We maintain a general liability insurance policy that covers certain liabilities of directors and officers of our corporation arising out of claims based on acts or omissions in their capacities as directors or officers.

Any underwriting agreement or distribution agreement that we enter into with any underwriters or agents involved in the offering or sale of any securities registered hereby may require such underwriters or dealers to indemnify us, some or all of our directors and officers and our controlling persons, if any, for specified liabilities, which may include liabilities under the Securities Act of 1933, as amended.

Item 16.	Exhibits
Exhibit Number	Description
3.1	Amended and Restated Certificate of Incorporation (incorporated by reference to the Company's Current Report on Form 8-K, filed with the SEC on August 31, 2021).
3.2	Amended and Restated Bylaws (incorporated by reference to the Company's Current Report on Form 8-K, filed with the SEC on August 31, 2021).
4.1	<u>Specimen stock certificate evidencing the shares of common stock (incorporated by reference to Amendment No. 2 to the Company's Registration Statement on Form S-4, filed with the SEC on August 5, 2021).</u>
4.2	Warrant Agreement, dated January 7, 2021, by and between Continental Stock Transfer & Trust Company and Locust Walk Acquisition Corp. (incorporated by reference to the Company's Current Report on Form 8-K, filed with the SEC on January 13, 2021).
4.3	Form of Pre-Funded Warrant (incorporated by reference to the Company's Current Report on Form 8-K, filed with the SEC on May 30, 2023).
4.4	Form of Common Warrant (incorporated by reference to the Company's Current Report on Form 8-K, filed with the SEC on May 30, 2023).

- 4.5 Form of Wainwright Warrant (incorporated by reference to the Company's Current Report on Form 8-K, filed with the SEC on May 30, 2023).
- 4.6 Form of Pre-Funded Warrant (incorporated by reference to the Company's Current Report on Form 8-K, filed with the SEC on June 8, 2023).
- 4.7 <u>Form of Common Warrant (incorporated by reference to the Company's Current Report on Form 8-K, filed with the SEC on June 8, 2023).</u>
- 4.8 Form of Wainwright Warrant (incorporated by reference to the Company's Current Report on Form 8-K, filed with the SEC on June 8, 2023).
- 5.1 Opinion of Latham & Watkins LLP.
- 10.1 Form of Securities Purchase Agreement (incorporated by reference to the Company's Current Report on Form 8-K, filed with the SEC on May 30, 2023).
- 10.2 Form of Securities Purchase Agreement (incorporated by reference to the Company's Current Report on Form 8-K, filed with the SEC on June 8, 2023).
- 23.1 Consent of Ernst & Young LLP, Independent Registered Public Accounting Firm.
- 23.2 Consent of Latham & Watkins LLP (included in Exhibit 5.1).
- 24.1 <u>Power of Attorney (included on the signature page hereto).</u>
- 107 <u>Filing Fee Table.</u>

Item 17. Undertakings

- (a) The undersigned registrant hereby undertakes:
 - (1) To file, during any period in which offers or sales are being made, a post-effective amendment to this registration statement:
 - (i) To include any prospectus required by Section 10(a)(3) of the Securities Act of 1933;
 - (ii) To reflect in the prospectus any facts or events arising after the effective date of the registration statement (or the most recent post-effective amendment thereof) which, individually or in the aggregate, represent a fundamental change in the information set forth in the registration statement. Notwithstanding the foregoing, any increase or decrease in volume of securities offered (if the total dollar value of securities offered would not exceed that which was registered) and any deviation from the low or high end of the estimated maximum offering range may be reflected in the form of prospectus filed with the Securities and Exchange Commission pursuant to Rule 424(b) if, in the aggregate, the changes in volume and price represent no more than 20 percent change in the maximum aggregate offering price set forth in the "Calculation of Registration Fee" table in the effective registration statement; and
 - (iii) To include any material information with respect to the plan of distribution not previously disclosed in the registration statement or any material change to such information in the registration statement;

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

- (2) That, for the purpose of determining any liability under the Securities Act of 1933, each such post-effective amendment shall be deemed to be a new registration statement relating to the securities offered therein, and the offering of such securities at that time shall be deemed to be the initial bona fide offering thereof.
- (3) To remove from registration by means of a post-effective amendment any of the securities being registered which remain unsold at the termination of the offering.
- (5) That, for the purpose of determining liability under the Securities Act of 1933 to any purchaser:
 - (A) Each prospectus filed by the registrant pursuant to Rule 424(b)(3) shall be deemed to be part of the registration statement as of the date the filed prospectus was deemed part of and included in the registration statement; and
 - (B) Each prospectus required to be filed pursuant to Rule 424(b)(2), (b)(5) or (b)(7) as part of a registration statement in reliance on Rule 430B relating to an offering made pursuant to Rule 415(a)(1)(i), (vii), or (x) for the purpose of providing the information required by Section 10(a) of the Securities Act of 1933 shall be deemed to be part of and included in the registration statement as of the earlier of the date such form of prospectus is first used after effectiveness or the date of the first contract of sale of securities in the offering described in the prospectus. As provided in Rule 430B, for liability purposes of the issuer and any person that is at that date an underwriter, such date shall be deemed to be a new effective date of the registration statement relating to the securities in the registration statement to which that prospectus relates, and the offering of such securities at that time shall be deemed to be the initial bona fide offering thereof. *Provided*, *however*, that no statement made in a registration statement or prospectus that is part of the registration statement or made in a document incorporated or deemed incorporated by reference into the registration statement or prospectus that is part of the registration statement will, as to a purchaser with a time of contract of sale prior to such effective date, supersede or modify any statement that was made in the registration statement or prospectus that was part of the registration statement or made in any such document immediately prior to such effective date.
- (6) That, for the purpose of determining liability of the registrant under the Securities Act of 1933 to any purchaser in the initial distribution of the securities:

The undersigned registrant undertakes that in a primary offering of securities of the undersigned registrant pursuant to this registration statement, regardless of the underwriting method used to sell the securities to the purchaser, if the securities are offered or sold to such purchaser by means of any of the following communications, the undersigned registrant will be a seller to the purchaser and will be considered to offer or sell such securities to such purchaser:

- (i) Any preliminary prospectus or prospectus of the undersigned registrant relating to the offering required to be filed pursuant to Rule 424;
- (ii) Any free writing prospectus relating to the offering prepared by or on behalf of the undersigned registrant or used or referred to by the undersigned registrant;
- (iii) The portion of any other free writing prospectus relating to the offering containing material information about the undersigned registrant or its securities provided by or on behalf of the undersigned registrant; and
- (iv) Any other communication that is an offer in the offering made by the undersigned registrant to the purchaser.
- (b) The undersigned registrant hereby undertakes that, for purposes of determining any liability under the Securities Act of 1933, each filing of the registrant's annual report pursuant to Section 13(a) or Section 15(d) of the Securities Exchange Act of 1934 (and, where applicable, each filing of an employee benefit plan's annual report pursuant to Section 15(d) of the Securities Exchange Act of 1934) that is

incorporated by reference in the registration statement shall be deemed to be a new registration statement relating to the securities offered therein, and the offering of such securities at that time shall be deemed to be the initial *bona fide* offering thereof.

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

SIGNATURES

Pursuant to the requirements of the Securities Act of 1933, as amended, the registrant certifies that it has reasonable grounds to believe that it meets all of the requirements for filing on Form S-3 and has duly caused this registration statement to be signed on its behalf by the undersigned, thereunto duly authorized, in the City of Solana Beach, State of California, on the 16th day of June 2023.

EFFECTOR THERAPEUTICS, INC.

By: /s/ Stephen Worland, Ph.D.

Stephen Worland, Ph.D.

President and Chief Executive Officer

POWER OF ATTORNEY

KNOW ALL PERSONS BY THESE PRESENTS, that each person whose signature appears below constitutes and appoints, jointly and severally, Stephen Worland, Ph.D. and Michael Byrnes, and each one of them, his or her true and lawful attorneys-in-fact and agents, each with full power of substitution and resubstitution, for him or her and in his or her name, place and stead, in any and all capacities, to file and sign any and all amendments (including post-effective amendments) to this registration statement, and to file and sign any other registration statement for the same offering covered by this registration statement that is to be effective upon filing pursuant to Rule 462(b) promulgated under the Securities Act of 1933, as amended, and all post-effective amendments thereto, and to file the same, with all exhibits thereto and all documents in connection therewith, with the Securities and Exchange Commission, granting unto said attorneys-in-fact and agents, and each of them full power and authority to do and perform each and every act and thing requisite and necessary to be done in connection therewith, as fully to all intents and purposes as he or she might or could do in person, hereby ratifying and confirming that each of said attorneys-in-fact and agents or any of them, or his or their substitute or substitutes, may lawfully do or cause to be done by virtue hereof. This power of attorney shall be governed by and construed with the laws of the State of Delaware and applicable federal securities laws.

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

SIGNATURE	TITLE	DATE
/s/ Stephen Worland, Ph.D. Stephen Worland, Ph.D.	President, Chief Executive Officer and Director (principal executive officer)	June 16, 2023
/s/ Michael Byrnes Michael Byrnes	Chief Financial Officer (principal financial and accounting officer)	June 16, 2023
/s/ Brian M. Gallagher, Jr., Ph.D. Brian M. Gallagher, Jr., Ph.D.	Director and Board Chair	June 16, 2023
/s/ Elizabeth P. Bhatt Elizabeth P. Bhatt	Director	June 16, 2023
/s/ Chris Ehrlich Chris Ehrlich	Director	June 16, 2023

/s/ Kristen Harrington-Smith	Director	June 16, 2023
Kristen Harrington-Smith	•	
/s/ Barbara Klencke, M.D.	Director	June 16, 2023
Barbara Klencke, M.D.		
/s/ John W. Smither	Director	June 16, 2023
John W. Smither		

LATHAM&WATKINS LLP

June 16, 2023

eFFECTOR Therapeutics, Inc. 142 North Cedros Avenue, Suite B Solana Beach, California 92075 12670 High Bluff Drive San Diego, California 92130

Tel: +1.858.523.5400 Fax: +1.858.523.5450

www.lw.com

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Re: Registration Statement on Form S-3; 20,559,865 Shares of Common Stock, Par Value \$0.0001 Per Share

To the addressee set forth above:

We have acted as special counsel to eFFECTOR Therapeutics, Inc., a Delaware corporation (the "Company"), in connection with the resale from time to time by the selling securityholders named in the Registration Statement (as defined below) of up to 20,559,865 shares of the Company's common stock, par value \$0.0001 per share (the "Warrant Shares") issuable upon exercise of outstanding common warrants (the "Warrants"). The Warrant Shares are included in a registration statement on Form S-3 under the Securities Act of 1933, as amended (the "Securities Act"), filed with the U.S. Securities and Exchange Commission (the "Commission") on June 16, 2022 (the "Registration Statement"). This opinion is being furnished in connection with the requirements of Item 601(b)(5) of Regulation S-K under the Securities Act, and no opinion is expressed herein as to any matter pertaining to the contents of the Registration Statement or the prospectus contained therein, other than as expressly stated herein with respect to the issuance of the Warrant Shares.

As such counsel, we have examined such matters of fact and questions of law as we have considered appropriate for purposes of this letter. With your consent, we have relied upon certificates and other assurances of officers of the Company and others as to factual matters without having independently verified such factual matters. We are opining herein as to the General Corporation Law of the State of Delaware (the "*DGCL*"), and we express no opinion with respect to any other laws.

Subject to the foregoing and the other matters set forth herein, it is our opinion that, as of the date hereof, when the Warrant Shares shall have been duly registered on the books of the transfer agent and registrar therefor in the name or on behalf of the Warrant holders, and have been issued by the Company against payment therefor (not less than par value) in the circumstances contemplated by the Warrants, the issuance of the Warrant Shares will have been duly authorized by all necessary corporate action of the Company and the Warrant Shares will be validly issued, fully paid and non-assessable. In rendering the foregoing opinion, we have

June 16, 2023 Page 2

LATHAM&WATKINS LLP

assumed that (i) the Company will comply with all applicable notice requirements regarding uncertificated shares provided in the DGCL, (ii) the Warrants have been duly executed and delivered by the Company and, under the internal laws of the State of New York, constitute valid and legally binding obligations of the Company and (iii) upon the issuance of any of the Warrant Shares, the total number of shares of Common Stock issued and outstanding will not exceed the total number of shares of Common Stock that the Company is then authorized to issue under its amended and restated certificate of incorporation.

This opinion is for your benefit in connection with the Registration Statement and may be relied upon by you and by persons entitled to rely upon it pursuant to the applicable provisions of the Securities Act. We consent to your filing this opinion as an exhibit to the Registration Statement and to the reference to our firm in the prospectus contained therein under the heading "Legal Matters." In giving such consent, we do not thereby admit that we are in the category of persons whose consent is required under Section 7 of the Securities Act or the rules and regulations of the Commission thereunder.

Sincerely,

/s/ Latham & Watkins LLP

Consent of Independent Registered Public Accounting Firm

We consent to the reference to our firm under the caption "Experts" in the Registration Statement (Form S-3) and related Prospectus of eFFECTOR Therapeutics, Inc. for the registration of 20,559,865 shares of its common stock and to the incorporation by reference therein of our report dated March 8, 2023, with respect to the consolidated financial statements of eFFECTOR Therapeutics, Inc, included in its Annual Report (Form 10-K) for the year ended December 31, 2022, filed with the Securities and Exchange Commission.

/s/ Ernst & Young LLP

San Diego, California June 16, 2023

Calculation of Filing Fee Table

Registration Statement on Form S-3

(Form Type)

eFFECTOR Therapeutics, Inc.

(Exact Name of Registrant as Specified in its Charter)

Table 1: Newly Registered and Carry Forward Securities

	Security Type	Security Class Title	Fee Calculation or Carry Forward Rule	Amount Registered	Proposed Maximum Offering Price Per Unit ⁽²⁾	Maximum Aggregate Offering Price ⁽²⁾	Fee Rate	Amount of Registration Fee
Fees to Be		Common						
Paid		Stock, par						
		value						
		\$0.0001						
	Equity	per share	457(c)	20,559,865(1)	\$1.015	\$20,868,262.98	0.0001102	\$2,299.69
Total Offering Amounts				\$20,868,262.98		\$2,299.69		
Total Fees Previously Paid					_			
Total Fee Offsets ⁽³⁾						_		
		Net Fee D	ue					\$2,299.69

- (1) Consists of 20,559,865 shares of the registrant's common stock issuable to certain of the selling stockholders upon exercise of outstanding warrants. Pursuant to Rule 416 under the Securities Act of 1933, as amended (the "Securities Act"), the shares of common stock being registered hereunder include such indeterminate number of shares of common stock as may be issuable with respect to the shares of common stock being registered hereunder as a result of any stock dividend, stock split, recapitalization or similar transaction.
- Estimated solely for the purpose of calculating the amount of the registration fee pursuant to Rule 457(c) of the Securities Act, on the basis of the average of the high and low prices for a share of the registrant's common stock as reported on the Nasdaq Capital Market on June 15, 2023, which date is within five business days prior to the filing of this Registration Statement.
- (3) The Registrant does not have any fee offsets.