



SUPPLEMENT DATED JUNE 27, 2019  
(To proxy statement/prospectus/information statement dated April 29, 2019)  
Date of Reconvened Special Meeting: July 12, 2019

YOUR VOTE IS VERY IMPORTANT

To the Stockholders of Flex Pharma, Inc.:

This is the first supplement to the proxy statement/prospectus/information statement which was declared effective by the Securities and Exchange Commission on April 29, 2019, that was first mailed to the stockholders of Flex Pharma, Inc. ("Flex Pharma") on or about May 3, 2019. The proxy statement/prospectus/information statement related to the special meeting of stockholders (the "Special Meeting") at which stockholders would be asked to approve, among other things, certain aspects of a business combination transaction in which the businesses of Flex Pharma and Salarium Pharmaceuticals, LLC ("Salarium") will be combined (the "Merger"). The Special Meeting originally convened on June 14, 2019, and was adjourned to July 12, 2019. The adjourned Special Meeting will take place on Friday, July 12, 2019 at 10:00 A.M. local time at the offices of Cooley LLP, 500 Boylston Street, 14<sup>th</sup> Floor, Boston MA 02116.

We are providing you with this supplement to provide you with recent information that we have learned about the discretionary authority of brokers to vote shares on Proposal No. 2 (the reverse stock split) and Proposal No. 4 (adjournment of the Special Meeting). Under the rules of the New York Stock Exchange ("NYSE") that govern how brokers may vote shares for which they have not received voting instructions from the beneficial owner, brokers are permitted to exercise discretionary voting authority only on "routine" matters. In the proxy statement/prospectus/information statement, we stated that under the rules of the NYSE, the proposals to be voted on at the Special Meeting (the "Flex Proposals"), were "non-discretionary" matters. However, following recent discussions with the NYSE, we have determined that Proposal No. 2 (the reverse stock split) and Proposal No. 4 (adjournment of the Special Meeting) are considered to be "routine" matters, and brokers are permitted to exercise discretionary voting authority with respect to such proposals. Therefore, Flex Pharma hereby amends the proxy statement/prospectus/information statement to clarify that Proposal No. 2 (the reverse stock split) and Proposal No. 4 (adjournment of the Special Meeting) are "routine" matters and that, as such, a broker will have discretion to vote a stockholder's shares on Proposal No. 2 (the reverse stock split) and Proposal No. 4 (adjournment of the Special Meeting) even if the broker has received no voting instructions from the stockholder with respect to those proposals.

The remaining Flex Proposals (Proposals No. 1 and 3) are considered non-routine matters, and therefore non-discretionary, under applicable NYSE rules. A broker or other nominee cannot vote without instructions on those non-routine matters.

In addition, we are pleased to announce that, on June 27, 2019, Flex Pharma, Salarius, and Falcon Acquisition Sub, LLC entered into Amendment No. 1 (the "Amendment") to the Agreement and Plan of Merger dated January 3, 2019 (as amended, the "Merger Agreement"). In addition to extending the term of the Merger Agreement, the parties have agreed to provide additional flexibility to Flex Pharma stockholders who will be receiving rights so that the rights will be transferrable separately from Flex Pharma's common stock associated with such rights.

**Regardless of the number of shares of common stock you own, your vote is important.** You do not have to take any action if you have previously voted your shares on the Flex Proposals and do not wish to change your vote. If you have already voted or given your proxy and wish to change your vote, you should follow the procedures described below.

**Whether or not you plan to attend the Special Meeting, if you have not already voted, we urge you to submit a proxy as promptly as possible to authorize in advance of the Special Meeting the voting of your shares by using one of the methods described in the proxy statement/prospectus/information statement and described below.** Even if you hold your shares in "street name," Flex Pharma urges you to provide voting instructions on all of the Flex Proposals to the organization that holds your shares to ensure that your shares will be represented at the Special Meeting.

For your convenience, we have enclosed a new proxy card with this supplement. **If you have already delivered a properly executed proxy and do not wish to change your vote, you do not need to do anything.** If you have not previously voted or if you wish to revoke or change your vote, please complete, date, sign and return the enclosed proxy card or submit a proxy by telephone or via the internet using the instructions on the enclosed proxy card. If you hold your stock in "street name" through a bank, broker or other nominee, please direct your bank, broker or other nominee to vote in accordance with the instructions you have received from your bank, broker or other nominee. Your cooperation in voting your shares will be greatly appreciated.

This supplement contains additional information about the Amendment. We urge you to carefully read this supplement, including the Amendment, attached as Annex S-A to this supplement, together with the proxy statement/prospectus/information statement. **In particular, you should carefully consider the matters discussed under the section entitled "Risk Factors" beginning on page 21 of the proxy statement/prospectus/information statement.**

If you would like additional copies, without charge, of this supplement or the proxy statement/prospectus/information statement or if you have questions about the Merger, including the procedures for voting your shares, you should contact Flex Pharma's proxy solicitor:

**INNISFREE M&A INCORPORATED**  
501 Madison Avenue, 20th Floor  
New York, NY 10022  
Stockholders Call Toll-Free: 888-750-5834

## QUESTIONS AND ANSWERS ABOUT THIS SUPPLEMENT

*The following provides brief answers to some of the more likely questions Flex Pharma stockholders may have in connection with this supplement. This supplement may not contain all of the information that is important to you. We urge you to read this supplement and the proxy statement/prospectus/information statement carefully.*

**Q: Why are you sending me this supplement and a new proxy card?**

**A:** We are sending you this supplement and new proxy card because (i) we have determined that Proposal No. 2 (the reverse stock split) and Proposal No. 4 (adjournment of the Special Meeting) are considered to be “routine” matters, thereby permitting brokers to exercise discretionary voting authority with respect to such proposals and (ii) on June 27, 2019, Flex Pharma, Salarius, and Falcon Acquisition Sub, LLC entered into Amendment No. 1 to the Agreement and Plan of Merger, providing Flex Pharma stockholders who will be receiving rights additional flexibility so that the rights will be transferrable separately from Flex Pharma’s common stock associated with such rights. A copy of the Amendment is attached as Annex S-A to this supplement. We encourage you to read the Amendment in its entirety, and, if you have not done so already, to read the proxy statement/prospectus/information statement in its entirety.

**Q: Why is the reverse stock split necessary?**

**A:** According to applicable Nasdaq rules, in order for Flex Pharma’s common stock to continue to be listed on the Nasdaq Capital Market, Flex Pharma must satisfy certain requirements established by such market. Flex Pharma’s board of directors expects that a reverse stock split of Flex Pharma’s common stock will increase the market price of Flex Pharma’s common stock so that Flex Pharma is able to maintain compliance with the relevant Nasdaq listing requirements for the foreseeable future.

**Q: How can I vote my Flex Pharma shares without attending the Special Meeting?**

**A:** If you have not previously voted, and you are a Flex Pharma stockholder, whether you hold shares directly as the stockholder of record or beneficially in “street name,” you may direct your vote without attending the Special Meeting. You may vote by granting a proxy or, for shares held in “street name,” by submitting voting instructions to your broker or other nominee. In most instances, you will be able to do this over the internet, by telephone or by mail. Please refer to the summary instructions below and the instructions included on your proxy card or, for shares held in “street name,” the voting instruction card provided by your broker or other nominee.

- By internet: If you have internet access, you may submit your proxy by following the internet voting instructions on the proxy card or voting instruction card sent to you.
- By Telephone: You may submit your proxy by following the telephone voting instructions on the proxy card or voting instruction card sent to you.
- By Mail: You may do this by marking, dating and signing your proxy card or, for shares held in “street name,” the voting instruction card provided to you by your broker or other nominee, and mailing it in the enclosed, self-addressed, postage prepaid envelope. No postage is required if mailed in the United States.

**Q: Can I change my vote or revoke my proxy?**

**A:** Any Flex Pharma stockholder of record voting by proxy, other than those Flex Pharma stockholders who have executed a voting agreement and irrevocable proxy, has the right to revoke the proxy:

- by sending a written notice at any time before the polls close at the Special Meeting stating that you would like to revoke your proxy to the Corporate Secretary of Flex Pharma;
- by, at any time before the polls close at the Special Meeting, providing a duly executed proxy card bearing a later date than the proxy being revoked;
- by, before 11:59 p.m. Eastern Time on July 11, 2019, submitting a proxy on a later date by telephone or via the internet (only your last telephone or internet proxy will be counted); or
- by attending the special meeting and voting in person. Attendance alone at the special meeting will not revoke a proxy. If a stockholder of Flex Pharma has instructed a broker to vote its shares of Flex Pharma's common stock that are held in "street name," the stockholder must follow directions received from its broker to change those instructions.

**Q: What are the amendments to the Merger Agreement?**

**A:** The primary purpose of the Amendment is to provide Flex Pharma stockholders who will be receiving rights additional flexibility so that the rights will be transferrable separately from Flex Pharma's common stock associated with such rights. In addition, the Amendment extends the date Flex Pharma's special meeting must be held by, and extends the date that gives Flex Pharma or Salarius a right to terminate the Merger Agreement.

**Q: How will the Amendment impact what I will receive in connection with the Merger?**

**A:** The Amendment does not change the amount of what you will receive in connection with the Merger. At or prior to the closing of the Merger, Flex Pharma will pay a dividend of or distribute one right per share of Flex Pharma's common stock to its current stockholders of record as of a date and time determined by Flex Pharma's board of directors. Each right will entitle such stockholders to receive a warrant to purchase shares of Flex Pharma's common stock six months and one day following the closing date of the Merger. The rights were expected to be evidenced by the certificate for the associated share of Flex Pharma common stock, and transferrable only in connection with the transfer of the associated shares of Flex Pharma common stock. Pursuant to the Amendment, these rights will be transferrable separately from the Flex Pharma common stock associated with such rights. For more information regarding the rights and warrants, we encourage you to read the proxy statement/prospectus/information statement in its entirety.

**Q: When and where is the reconvened special meeting?**

**A:** The reconvened special meeting of Flex Pharma stockholders will be held on Friday, July 12, 2019 at 10:00 A.M. local time at the offices of Cooley LLP, 500 Boylston Street, 14<sup>th</sup> Floor, Boston MA 02116. You may attend the reconvened special meeting and vote your shares in person, rather than completing, signing, dating and returning your proxy or submitting your proxy over the internet, by telephone or by mail.

**Q: When do you expect to complete the Merger?**

**A:** We cannot assure you when, or if, the Merger will occur because we must first obtain the approval of Flex Pharma stockholders at the reconvened special meeting. If approved by Flex Pharma stockholders, it is anticipated that the Merger will be completed promptly following such approval. However, it is possible that factors outside our control could require us to complete the Merger at a later time or not complete it at all.

Subject to the terms and conditions set forth in the proxy statement/prospectus/information statement, all proxies received by Flex Pharma will be effective, notwithstanding any transfer of the shares to which those proxies relate, unless prior to the closing of the polls at the Special Meeting, Flex Pharma receives a written notice of revocation signed by the person who, as of the record date, was the registered holder of those shares. The notice of revocation must indicate the certificate number and numbers of shares to which the revocation relates and the aggregate number of shares represented by the certificate(s). All written notices should be addressed as follows: Flex Pharma, Inc., 31 St. James Avenue, 6th Floor, Boston, MA 02116, Attention: Corporate Secretary.

To revoke a proxy previously submitted by telephone or through the internet, you may simply vote again at a later date, using the same procedures, in which case your later submitted vote will be recorded and your earlier vote revoked. Attendance at the Special Meeting will not cause your previously granted proxy to be revoked unless you change your proxy instructions as described above.

For shares held beneficially by you in “street name,” you may change your vote by submitting new voting instructions to your broker or other nominee in accordance with the procedures established by it. Please contact your broker or other nominee and follow its directions to change your vote.

This supplement, which forms part of a registration statement on Form S-4 that Flex Pharma filed with the SEC, constitutes a supplement to the prospectus of Flex Pharma for purposes of the Securities Act of 1933, as amended, with respect to the Flex Pharma common stock, rights and warrants to be issued in connection with the Merger. This supplement also constitutes a supplement to the proxy statement of Flex Pharma for purposes of the Securities Exchange Act of 1934, as amended. You should not assume that the information contained in this supplement is accurate as of any date other than June 27, 2019, the date of this supplement. The issuance of Flex Pharma common stock, rights and warrants in connection with the Merger will not create any implication to the contrary.

To the extent the information in this second supplement differs from or updates the information contained in the proxy statement/prospectus/information statement, the information in this supplement governs. Unless otherwise indicated or the context requires otherwise, all defined terms used herein but not defined herein shall have the meanings given to such terms in the proxy statement/prospectus/information statement.

**The Flex Pharma board of directors recommends you vote “FOR” each of the Flex Proposals.**

Yours sincerely,

/s/ William McVicar

/s/ David J. Arthur

---

William McVicar  
President, Chief Executive Officer and Director  
Flex Pharma, Inc.

---

David J. Arthur  
Chief Executive Officer and Manager  
Salarius Pharmaceuticals, LLC

**Neither the SEC nor any state securities commission has passed upon the adequacy or accuracy of this supplement or the proxy statement/prospectus/information statement. Any representation to the contrary is a criminal offense.**

Annex S-A—Amendment No. 1 to the Agreement and Plan of Merger

**Forward-Looking Statements.** Certain statements in this communication constitute “forward-looking statements” within the meaning of Section 27A of the Securities Act and Section 21E of the Securities Exchange Act of 1934, as amended. These forward-looking statements reflect Flex Pharma’s current views about its plans. Although Flex Pharma believes that its plans as reflected in or suggested by those forward-looking statements are reasonable, it can give no assurance that the plans, intentions, expectations or strategies will be attained or achieved. Furthermore, actual results will be affected by a variety of risks and uncertainties that are beyond its control. Risks and uncertainties include, but are not limited to: inability to complete the proposed transaction; the ability of the proposed transaction to increase stockholder value; and other risks and uncertainties detailed in the risk factors section of Flex Pharma’s Registration Statement on Form S-4 (File No. 333-229666), as amended, Annual Report on Form 10-K and Quarterly Report on Form 10-Q filed with the SEC, as well as other filings Flex Pharma makes with the SEC from time-to-time. Flex Pharma disclaims any obligation to update information contained in these forward-looking statements, whether as a result of new information, future events or otherwise, except as required by law.

**Participants in Solicitation.** Flex Pharma, Salarius and their respective directors or managers and executive officers may be deemed to be participants in the solicitation of proxies from the holders of Flex Pharma common stock in connection with the proposed transaction. Information about Flex Pharma’s directors and executive officers is set forth in Flex Pharma’s Annual Report on Form 10-K for the period ended December 31, 2018, which was filed with the SEC on March 6, 2019, and amended on April 16, 2019. Other information regarding the interests of such individuals, as well as information regarding Salarius’ managers and executive officers and other persons who may be deemed participants in the proposed transaction, is set forth in the definitive proxy statement/prospectus/information statement. You may obtain free copies of these documents at the website maintained by the SEC at [www.sec.gov](http://www.sec.gov) or on Flex Pharma’s website at [www.flex-pharma.com](http://www.flex-pharma.com) or by contacting John McCabe at [jmccabe@flex-pharma.com](mailto:jmccabe@flex-pharma.com).

**Non-Solicitation.** This communication shall not constitute an offer to sell or the solicitation of an offer to sell or the solicitation of an offer to buy any securities, nor shall there be any sale of securities in any jurisdiction in which such offer, solicitation or sale would be unlawful prior to registration or qualification under the securities laws of any such jurisdiction. No public offer of securities in connection with the Merger shall be made except by means of a prospectus meeting the requirements of Section 10 of the Securities Act of 1933, as amended.

**AMENDMENT NO. 1 TO  
AGREEMENT AND PLAN OF MERGER**

This Amendment No. 1, dated as of June 27, 2019 (this “**Amendment**”), to the Agreement and Plan of Merger, dated as of January 3, 2019 (the “**Agreement**”), is being entered into by and among Flex Pharma, Inc., a Delaware corporation (“**Parent**”), Falcon Acquisition Sub, LLC, a Delaware limited liability company and a wholly owned subsidiary of Parent (“**Merger Sub**”), and Salarius Pharmaceuticals, LLC, a Delaware limited liability company (the “**Company**”). Capitalized terms not defined herein shall have the meanings given in the Agreement.

**RECITALS**

WHEREAS, pursuant to Section 11.2 of the Agreement, the Agreement may be amended with the approval of the respective Boards of Directors of the Company, Merger Sub and Parent if such amendment is in writing and signed by the Company, Merger Sub and Parent.

NOW, THEREFORE, in consideration of the foregoing, the mutual promises set forth herein and for other good and valuable consideration, the receipt of which are hereby acknowledged, the undersigned parties, hereby intending to be legally bound, agree to amend the Agreement as set forth below.

**AGREEMENT**

1. Amendments to the Agreement.

(a) The first paragraph of Section 1.12 to the Agreement is hereby amended and restated in its entirety as follows:

“**Warrants to be issued to Parent Stockholders.** At or prior to the Closing, Parent shall pay a dividend of, or distribute, to Parent Stockholders of record as of a date and time determined by Parent Board of Directors (provided that such date is on or prior to the Effective Time) one right (each, a “**Right**” and collectively the “**Rights**”) per share of Parent Common Stock (“**Warrant Distribution**”). Each Right shall entitle the holder thereof to receive a warrant to purchase shares of Parent Common Stock (each a “**Warrant**” and collectively the “**Warrants**”) six months and one day following the Closing Date (the “**Issuance Date**”). Each Right shall be evidenced by a certificate. The Warrants shall contain customary terms and conditions agreed by the Parties, provided that the Warrants:”

(b) Section 5.3(a) to the Agreement is hereby amended by replacing the words “60 calendar days” with the words “120 calendar days”.

(c) Section 9.1(b) to the Agreement, is hereby amended by replacing the words “the date that is six months after the date of this Agreement” with the words “August 31, 2019”.

2. This Amendment, together with the Agreement and all exhibits and schedules thereto, constitute the entire agreement, and supersede all other prior agreements and understandings, both written and oral, between the parties, or any of them, with respect to the subject matter hereof and thereof, and this Amendment is not intended to grant standing to any Person other than the parties hereto.

3. This Amendment shall not constitute an amendment or waiver of any provision of the Agreement not expressly amended or waived herein and shall not be construed as an amendment, waiver or consent to any action that would require an amendment, waiver or consent except as expressly stated herein. The Agreement, as amended by this Amendment, is and shall continue to be in full force and effect.

4. The provisions of Article 11 of the Agreement shall apply to this Amendment *mutatis mutandis* unless otherwise modified herein.

[signature page follows]

IN WITNESS WHEREOF, the parties hereto have caused this Amendment to be duly executed by their respective authorized officers as of the day and year first above written.

**FLEX PHARMA, INC.**

By: /s/ William McVicar, Ph.D.  
Name: William McVicar, Ph.D.  
Title: President and Chief Executive Officer

**FALCON ACQUISITION SUB, LLC**

By: Flex Pharma, Inc.  
its sole member

By: /s/ William McVicar, Ph.D.  
Name: William McVicar, Ph.D.  
Title: President and Chief Executive Officer

**SALARIUS PHARMACEUTICALS, LLC**

By: /s/ David J. Arthur  
Name: David J. Arthur  
Title: President and Chief Executive Officer

*[Signature Page to Amendment No. 1 to Merger Agreement]*



**FLEX PHARMA / INC.**  
 37 St. James Avenue  
 8th Floor  
 Boston, MA 02116

Investor Address Line 1  
 Investor Address Line 2  
 Investor Address Line 3  
 Investor Address Line 4  
 Investor Address Line 5  
 John Sample  
 1234 ANYWHERE STREET  
 ANY CITY, ON A1A 1A1



**VOTE BY INTERNET - www.proxyvote.com**  
 Use the Internet to transmit your voting instructions and for electronic delivery of information. Vote by 11:59 P.M. ET on 06/13/2019. Have your proxy card in hand when you access the web site and follow the instructions to obtain your records and to create an electronic voting instruction form.

**ELECTRONIC DELIVERY OF FUTURE PROXY MATERIALS**  
 If you would like to reduce the costs incurred by our company in mailing proxy materials, you can consent to receiving all future proxy statements, proxy cards and annual reports electronically via e-mail or the Internet. To sign up for electronic delivery, please follow the instructions above to vote using the Internet and, when prompted, indicate that you agree to receive or access proxy materials electronically in future years.

**VOTE BY PHONE - 1-800-690-6903**  
 Use any touch-tone telephone to transmit your voting instructions. Vote by 11:59 P.M. ET on 06/13/2019. Have your proxy card in hand when you call and then follow the instructions.

**VOTE BY MAIL**  
 Mark, sign and date your proxy card and return it in the postage-paid envelope we have provided or return it to Vote Processing, c/o Broadridge, 51 Mercedes Way, Edgewood, NY 11717.

\_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

NAME  
 THE COMPANY NAME INC. - COMMON

CONTROL # → 0000000000000000  
 SHARES  
 PAGE 1 OF 2

THIS PROXY CARD IS VALID ONLY WHEN SIGNED AND DATED. KEEP THIS PORTION FOR YOUR RECORDS. DETACH AND RETURN THIS PORTION ONLY.

The Board of Directors recommends you vote FOR the following proposal:

	For	Against	Abstain
1. To approve the issuance of Flex Pharma's common stock to Salaris' members pursuant to the Merger Agreement and the resulting "change of control" of Flex Pharma under Nasdaq rules and the dividend or distribution of rights, and issuance of Warrants, to Flex Pharma's stockholders pursuant to the Merger Agreement.	0	0	0
2. To approve an amendment of Flex Pharma's Certificate of Incorporation to effect a reverse stock split of Flex Pharma's common stock.	0	0	0
3. To approve an amendment of Flex Pharma's Certificate of Incorporation to effect the name change of Flex Pharma to "Salaris Pharmaceuticals, Inc."	0	0	0
4. To consider and vote on an adjournment of the special meeting, if necessary or appropriate, to solicit additional proxies if there are insufficient votes at the time of the meeting to approve Proposals 1, 2 or 3.	0	0	0

**NOTE:** Such other business as may properly come before the meeting or any adjournment thereof.

Please sign exactly as your name(s) appear(s) hereon. When signing as attorney, executor, administrator, or other fiduciary, please give full title as such. Joint owners should each sign personally. All holders must sign. If a corporation or partnership, please sign in full corporate or partnership name by authorized officer.

Investor Address Line 1  
 Investor Address Line 2  
 Investor Address Line 3  
 Investor Address Line 4  
 Investor Address Line 5  
 John Sample  
 1234 ANYWHERE STREET  
 ANY CITY, ON A1A 1A1

Signature [PLEASE SIGN WITH INK] Date JOB # Signature (Joint Owners) Date SHARES CUSIP # SEQUENCE #

0000418837\_1 RT.0.1.18

02 0000000000



**Important Notice Regarding the Availability of Proxy Materials for the Special Meeting:** The Proxy Statement/Prospectus/Information Statement is available at [www.proxyvote.com](http://www.proxyvote.com)

---

	<p style="text-align: center;"><b>FLEX PHARMA, INC.</b> <b>Special Meeting of Stockholders</b> <b>June 14, 2019, 10:00 AM</b> <b>This proxy is solicited by the Board of Directors</b></p>
<p>The shareholder(s) hereby appoint(s) William McVicar and John McCabe, or either of them, as proxies, each with the power to appoint his substitute, and hereby authorizes them to represent and to vote, as designated on the reverse side of this ballot, all of the shares of Common stock of FLEX PHARMA, INC. that the shareholder(s) is/are entitled to vote at the Special Meeting of Stockholder(s) to be held at 10:00 a.m. EDT on June 14, 2019, at the offices of Cooley LLP, 500 Boylston Street, 14th Floor, Boston, MA 02116 and any adjournment or postponement thereof. Capitalized terms used in this proxy but not defined in this proxy have the meaning given to such terms in the Proxy Statement/ Prospectus/Information Statement.</p> <p>This proxy, when properly executed, will be voted in the manner directed herein. If no such direction is made, is proxy will be voted in accordance with the Board of Directors' recommendations</p> <p style="text-align: center;">Continued and to be signed on reverse side</p>	

0000413837\_2 RT 0.1.18