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January 22, 2015

By EDGAR Transmission

Securities and Exchange Commission
Division of Corporation Finance
100 F Street, N.E.
Washington, DC 20549
Attn: Jeffrey P. Riedler
Preston R. Brewer

Re: Flex Pharma, Inc.
Registration Statement on Form S-1
File No. 333-201276

Ladies and Gentlemen:

On behalf of Flex Pharma, Inc. (the "**Company**"), we are providing this letter and the supplemental materials in response to comments received from the staff (the "**Staff**") of the Securities and Exchange Commission by letter, dated November 25, 2014 ("**Comment Letter**"), regarding the Registration Statement on Form S-1 referenced above (the "**Registration Statement**").

On behalf of the Company, in accordance with Rule 418 under the Securities Act of 1933, as amended (the "**Act**"), and in response to comment #22 set forth in the Comment Letter, we hereby supplementally provide to the Staff the written communications (the "**Supplemental Materials**") provided to potential investors in reliance on Section 5(d) of the Act and described below. In accordance with Rule 418 of the Act, the Supplemental Materials were not filed in electronic format.

Exhibit A attached hereto includes a series of emails (the "**[*] Emails**") between Christoph Westphal, M.D., Ph.D., the Company's Chief Executive Officer, and individuals at [*], Inc. ("**[*]**"). [*] is a global leader in developing and commercializing medical technology products, and in January 2015, Dr. Westphal met with several individuals at [*] to discuss a potential strategic business partnership between the parties. Internally by email, in discussing the potential relationship with the Company, individuals from [*] contemplated a potential investment in the Company and forwarded these emails and certain follow-up questions to Dr. Westphal. In response, Dr. Westphal provided the additional information included in the [*] Emails. Thereafter, [*] expressed an interest in participating in the Company's initial public offering, at which time Dr. Westphal introduced [*] to the Company's underwriters for its initial public offering.

Exhibit B attached hereto includes emails (the "**[*] Emails**") between Dr. Westphal and individuals at [*] Capital Management LLC ("**[*]**"). On January 21, 2015, Dr. Westphal received an inbound email from [*], with whom he has a personal relationship, in

[*] CERTAIN CONFIDENTIAL INFORMATION CONTAINED IN THIS DOCUMENT, MARKED BY BRACKETS, HAS BEEN OMITTED AND SUBMITTED SEPARATELY TO THE COMMISSION PURSUANT TO 17 CFR §200.83

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Which Mr. [*] expresses an interest in participating in the Company's initial public offering. Dr. Westphal responded to the email from Mr. [*] by introducing Mr. [*] to the Company's underwriters for its initial public offering. The email from Mr. [*] to Dr. Westphal was not requested by Dr. Westphal, or otherwise discussed between the parties, prior to being sent to Dr. Westphal.

The Company asserts that the [*] Emails and the [*] Emails constituted written "test the waters" communications. The Company bases this assertion on (i) its status as an emerging growth company as defined in the JOBS Act, (ii) the fact that, once it appeared that the parties were interested in investing in the Company, the emails were sent in reply to each of [*] and [*] in connection with determining their interest in participating in the Company's initial public offering and (iii) its belief that (A) [*] is a "qualified institutional buyer" because it is an investment company and/or an investment advisor that, in the aggregate owns and invests on a discretionary basis at least \$100 million in securities of issuers not affiliated with [*]; and (B) [*] is an institution that is an "accredited investor" because it is a corporation not formed for the specific purpose of acquiring the Company's securities, with total assets in excess of \$5,000,000.

Pursuant to Section 5(d) of the Securities Act, an emerging growth company may engage in oral or written communications with potential investors that are "qualified institutional buyers" (as defined in Rule 144A) or institutions that are "accredited investors" (as defined in Regulation D) to determine whether such investors have any interest in a contemplated securities offering, either prior to or following the date of filing of a registration statement with respect to such securities. The purpose of the "test the waters" provision of the JOBS Act is to enable emerging growth companies to communicate with institutional investors to determine their interest in participating in an offering by that company. Conversely, emerging growth companies may not engage in "test the waters" communications with investors that don't meet the required criteria. The Company asserts that it has complied with the provision.

During its initial meeting with [*], the Company intended to discuss a potential strategic relationship between the parties relating to their respective products, not an investment by [*] in the Company. Notwithstanding this initial focus, the Company believes it is appropriate to treat the [*] Emails as “testing the waters” communications in light of [*] subsequent emails expressing interest in participating in the initial public offering. Once [*] informed Dr. Westphal that it did, in fact, desire to invest in the Company’s offering, Mr. Westphal introduced individuals at [*] to the Company’s lead underwriter, Jefferies LLC, without further discussion. Furthermore, upon review of Dr. Westphal’s answers to [*] questions, the Company does not believe any of the additional information provided to [*] in the [*] Emails constitutes material information or information that would otherwise be appropriate to include in the Company’s Registration Statement.

The Company also believes that its response to the email received from [*] constituted permissible “testing the waters” communications and that the email dialogue between the parties is consistent with the type of dialogue between business people with a preexisting relationship rather than an offer to sell securities, or a solicitation of an offer to buy securities, under Section 5 of the Securities Act of 1933, as amended. The [*] Email was an unsolicited, inbound communication from a potential investor to Dr. Westphal. Upon receipt, Dr. Westphal immediately introduced [*] to the Company’s lead underwriter, Jefferies LLC, without further discussion.

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We hereby request, pursuant to Rule 418 under the Act, that the Supplemental Materials be returned or destroyed promptly following the Staff’s completion of its review of such information or at such other time as may be requested by the Company. If returned, the supplemental materials may be returned to me, the responsible representative, at 500 Boylston Street, Boston, MA 02116.

If you have any further questions or comments, or if you require any additional information, please contact the undersigned by telephone at (617) 937-2316.

Thank you for your assistance.

Very truly yours,

/s/ Marc A. Recht

Marc A. Recht, Esq.

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Exhibit A

[*] Emails

[provided supplementally]

Exhibit B

[*] Emails

[provided supplementally]
