CytRx Corporation

11726 San Vicente Boulevard, Suite 650 Los Angeles, California 90049

ANNUAL MEETING OF STOCKHOLDERS to be held on July 30, 2020

Supplement to Proxy Statement dated June 12, 2020

CytRx Corporation (the "Company") is filing this amendment and supplement (this "Supplement") to its proxy statement dated June 12, 2020 (the "Proxy Statement") in connection with the Company's Annual Meeting of Stockholders to be held on July 30, 2020.

A. The Proxy Statement stated that Proposal No. 2 – Approval of Amendment to our Restated Certificate of Incorporation to Increase the Authorized Shares of Common Stock From 41,666,666 To 51,666,666 ("Proposal 2") is considered a "non-routine" matter, meaning that a bank, broker or other nominee may not vote on the matter without receiving instructions from beneficial owners. However, the New York Stock Exchange ("NYSE") has notified the Company of its determination that Proposal 2 is a "routine" matter, eligible for discretionary voting by banks, brokers and other nominees under the NYSE rules. Therefore, the following paragraphs under "Will my shares be voted if I do not return my proxy card?" on page 3 of the Proxy Statement are amended and restated in their entirety to read as follows:

"Brokerage firms have authority under the rules of The New York Stock Exchange to vote customers' unvoted shares on "routine" matters only. Under these rules, Proposals 1 and 2 are Proposal 1 is considered non-routine, so if you do not give your broker instructions, your shares will be treated as broker non-votes and will not be voted with respect to each of Proposals 1 and 2 Proposal 1. Proposal 3 Each of Proposals 2 and 3 is considered a routine matter, accordingly there will not be any broker non-votes on these Proposals.

If you do not return a proxy card to vote your shares, your brokerage firm may either:

- vote your shares on Proposals 2 and/or 3 only; or
- leave your shares unvoted."

B. In addition, we are modifying the description of the effect of abstentions and broker non-votes on Proposal 2, which previously stated that abstentions and broker non-votes will have no effect on the outcome of this proposal. This description has been modified to state that abstentions will have the same effect as a vote against this proposal, and to delete the reference to broker non-votes, which are no longer expected for this proposal. The paragraph under "What are the voting rights of the holders of our common stock?" on pages 3-4 of the Proxy Statement is amended and restated in its entirety to read as follows:

"Approval of Proposal 2, the amendment to our Restated Certificate of Incorporation, will require the affirmative vote of the holders of a majority of the outstanding shares of common stock. As a result, abstentions and broker non votes have no effect on the outcome of this proposal. As a result, abstentions have the same effect as a vote against this proposal."

This Supplement should be read in conjunction with the Proxy Statement. Except as specifically amended by this Supplement, all information in the Proxy Statement remains unchanged. If you have already submitted a proxy and do not wish to change your vote, you need not take any further action. If you would like to change or revoke your prior vote on any proposal, please refer to the Proxy Statement for instructions on how to do so.