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**SUPPLEMENT TO PROXY STATEMENT
FOR THE ANNUAL MEETING OF SHAREHOLDERS
TO BE HELD ON SEPTEMBER 16, 2010**

On or about August 6, 2010, Cell Therapeutics, Inc. (the “Company”) furnished or otherwise made available to shareholders its proxy statement (the “Proxy Statement”) describing the matters to be voted upon at the Company’s Annual Meeting of Shareholders (the “Annual Meeting”) to be held at 10:00 a.m. Pacific Daylight Time (PDT) on Thursday, September 16, 2010, at 501 Elliott Avenue West, Suite 400, Seattle, Washington 98119, USA. This supplement (this “Supplement”) revises the Proxy Statement and should be read in conjunction with it. This Supplement is first being furnished or otherwise made available to shareholders on or about August 24, 2010. All capitalized terms used but not defined in this Supplement have the meanings ascribed to them in the Proxy Statement.

**PROPOSAL 3
APPROVAL OF AN AMENDMENT TO THE COMPANY’S
2007 EQUITY INCENTIVE PLAN**

At the Annual Meeting, shareholders are being asked, among other things, to vote on a proposal to approve an amendment to the Company’s 2007 Equity Incentive Plan, as amended and restated (the “2007 Equity Plan”), to increase the number of shares available for issuance under the 2007 Equity Plan by 45,000,000 shares (which is identified in the Proxy Statement as Proposal 3). In order to facilitate shareholder approval of the amendment to the 2007 Equity Plan, the Company is revising its proposed amendment to the 2007 Equity Plan to reduce the proposed increase in the number of shares subject to the 2007 Equity Plan from 45,000,000 shares to 40,000,000 shares. The reduced proposal of 40,000,000 shares conforms to the proposal that was presented to shareholders at the Company’s Special Meeting of Shareholders, which was adjourned on June 29, 2010. The Company’s Board of Directors approved the reduction in the proposed share increase on August 23, 2010. All other terms of the 2007 Equity Plan will remain as described in the Proxy Statement.

The Company intends to present the 2007 Equity Plan, as further amended and described in this Supplement, to shareholders for their approval at the Annual Meeting

and all references to the 2007 Equity Plan contained in the Proxy Statement and proxy card pertaining to the Annual Meeting shall be deemed to refer to the 2007 Equity Plan, as so amended. The 2007 Equity Plan marked to show the proposed amendment is attached as Exhibit 99.1 to the Current Report on Form 8-K being filed by the Company on the date hereof with the U.S. Securities and Exchange Commission (the “SEC”). Shareholders may obtain, free of charge, a copy of such Current Report on Form 8-K and the full text of the 2007 Equity Plan at the SEC’s website: www.sec.gov.

**THE BOARD OF DIRECTORS UNANIMOUSLY RECOMMENDS A VOTE
“FOR” THE APPROVAL OF
THE AMENDMENT TO THE 2007 EQUITY PLAN, AS REVISED.**

Voting of Proxies

If you have already voted your shares and do not wish to change your vote, no further action is necessary. You do not need to submit a new proxy card unless you wish to change your vote. All validly executed proxy cards or votes cast via telephone or the internet at any time (either prior to or after the date hereof) indicating a vote for or against approval of the 2007 Equity Plan will be deemed to constitute a vote for or against approval of the 2007 Equity Plan, as further amended and described in this Supplement.

If you have already voted your shares and you wish to change your vote on any matter, you may revoke your proxy before it is voted at the Annual Meeting by delivering written notice to the Company’s secretary, Louis A. Bianco, at the Company’s principal executive offices, by executing and delivering another proxy dated as of a later date or by voting in person at the Annual Meeting. For the Company’s Italian shareholders, any written notice of revocation or another proxy, in either case dated as of a later date, must also be accompanied by another certification of participation in the Italian Central Depository System (“Certification”) as described in the Proxy Statement.

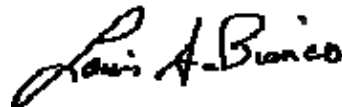
Whether or not you intend to be present at the Annual Meeting, U.S. shareholders are requested to sign and date the proxy card if they have not done so and return it in the envelope previously provided, and Italian shareholders are requested to request and return an Italian proxy card together with a completed Certification as instructed in the Proxy Statement. If you are one of the Company’s Italian shareholders, please remember to request a Certification from your broker and include it in the same envelope as your Italian proxy card in order for your vote to be counted. If your shares are held in a bank or brokerage account in the United States, or if you are registered directly with the Company as the record holder of your shares, you may be eligible to vote your proxy electronically or by telephone. Please refer to Proxy Statement for additional information and instructions.

For your convenience, another proxy card is being mailed to all shareholders of record, together with this Supplement. **ALL SHAREHOLDERS WHO HAVE NOT YET VOTED OR WHO WISH TO CHANGE THEIR VOTE ARE URGED TO**

RETURN THE ENCLOSED PROXY CARD OR OTHERWISE VOTE THEIR SHARES IN THE MANNER DESCRIBED ABOVE AS SOON AS POSSIBLE.

We thank you on behalf of the Board of Directors. Should you have any questions, please feel free to contact our proxy solicitation agent toll-free at (888) 55PROXY or (888) 557-7699, or our Investor Relations department at (206) 272-4345.

By Order of the Board of Directors,

A handwritten signature in black ink that reads "Louis A. Bianco". The signature is written in a cursive style with a large initial "L" and "B".

Louis A. Bianco
Executive Vice President, Finance &
Administration

Important Notice Regarding the Availability of Proxy Materials for the Annual Meeting to Be Held on September 16, 2010:

The Proxy Statement and this Supplement is available on the Company's website at <http://www.celltherapeutics.com/shareholders>.