

August 21, 2007

Mail Stop 6010

By U.S. Mail and facsimile to (949) 250-3412

Michael A. Mussallem
Chairman of the Board and Chief Executive Officer
Edwards Lifesciences Corporation
One Edwards Way, Irvine, California 92614

**Re: Edwards Lifesciences Corporation
Definitive 14A
Filed March 30, 2007
File No. 001-15525**

Dear Mr. Mussallem:

We have limited our review of your definitive proxy statement to your executive compensation and other related disclosure and have the following comments. Our review of your filing is part of the Division's focused review of executive compensation disclosure.

Please understand that the purpose of our review process is to assist you in your compliance with the applicable disclosure requirements and to enhance the overall disclosure in your filings. We look forward to working with you in these respects. We welcome any questions you may have about our comments or any other aspect of our review. Feel free to call me at the telephone number listed at the end of this letter.

In some comments we have asked you to provide us with additional information so we may better understand your disclosure. Please do so within the time frame set forth below. You should comply with the remaining comments in all future filings, as applicable. Please confirm in writing that you will do so and also explain to us how you intend to comply. Please understand that after our review of all of your responses, we may raise additional comments.

If you disagree with any of these comments, we will consider your explanation as to why our comment is inapplicable or a revision is unnecessary. Please be as detailed as necessary in your explanation.

Compensation Discussion and Analysis, page 25

1. Please elaborate on the role of your chief executive officer in your compensation processes and his input during the crafting of compensation packages. For example, does your chief executive officer make recommendations to the compensation committee relating to measures, targets and similar items that affect his compensation? Does he retain the ability to call or attend compensation committee meetings or meet with the consultants used by the compensation committee?

Competitive Data, page 26

2. You state that in addition to a review of data from the comparator group, you also use compensation data for companies in the high technology, life sciences and medical device industries reported in nationally recognized surveys. Explain why you looked at these additional companies and discuss the degree to which the compensation committee considered such companies comparable to you.

Elements of Compensation, page 26

3. You provide a description of how company performance affects annual bonuses and equity-based awards, but only a general discussion and little analysis of the effect of individual performance, even though your disclosure suggests it is a factor considered by the compensation committee. For example, you state on page 26 that in determining a named executive officer's base salary, one of the factors that the compensation committee considers is individual performance as measured against performance management objectives set at the beginning of the year. As another example, you state on page 27 that participants in your incentive plan receive annual cash bonuses tied to the achievement of corporate financial measures and operating goals *and* individual performance objectives, yet you only briefly discuss such objectives in general terms in the third whole paragraph on page 28. You also indicate on page 29 that the compensation committee determines the size of the long-term incentive award for each named executive officer based on, among other factors, such executive's level of responsibilities, ability to contribute to and influence long-term results of the company, and individual performance and that of these factors, ability to influence the company's long-term goals and individual performance are weighted most heavily. Please expand your disclosure to provide additional detail and an analysis of how individual performance contributed to actual 2006 compensation for the named executive officers. For example, disclose and discuss in greater detail the achievement of the financial and operations goals within a named executive officer's individual area of responsibility. Also expand your discussion and analysis of the factors the compensation committee considered when it established personal objectives for your chief executive officer. Were any of the

factors listed in the third whole paragraph on page 28 considered by the compensation committee to be more significant in the ultimate determination of the chief executive officer's individual performance? Did the chief executive officer excel in certain factors and perform at target for others? See Item 402(b)(2)(vii) of Regulation S-K.

Incentive Pay Target, page 27

4. You state that the target award for your chief executive officer (\$1,508,000 for 2006) was established at twice his base salary so as to provide the compensation committee with the ability to apply only negative discretion in determining his actual bonus payout. Reconcile this statement as well as disclosure in the fourth whole paragraph on page 28 and the fourth whole paragraph on page 31 with disclosure in your Grants of Plan-Based Awards table on page 35 which indicates that Mr. Mussallem's *maximum* non-equity incentive plan award was \$1,508,000 and his target was \$754,000. Also, given this inconsistency, confirm that the compensation committee in fact approved an incentive pay target for 2007 equal to twice Mr. Mussallem's 2007 base salary. Disclose the maximum target as well.
5. You have not provided quantitative disclosure of the terms of all of the necessary targets to be achieved in order for your executive officers to earn their incentive compensation. Please disclose the specific company financial goals, key operating drivers and the individual performance objectives used to determine incentive amounts and how your incentive awards are specifically structured around such performance goals and individual objectives. For the company financial goals, please disclose not only the target level for which the financial measure achievement variable in your formula would equal 100%, but also the minimum and maximum levels for which such variable would equal 25% and 150%, respectively. To the extent you believe that disclosure of these target, minimum and maximum levels is not required because it would result in competitive harm such that you may omit this information under Instruction 4 to Item 402(b) of Regulation S-K, please provide on a supplemental basis a detailed explanation for such conclusion. Please also disclose how difficult it would be for the named executive officers or how likely it will be for you to achieve the undisclosed target levels or other factors. General statements regarding the level of difficulty or ease associated with achieving performance goals are not sufficient. In discussing how difficult it will be for an executive or how likely it will be for you to achieve the target levels or other factors, please provide as much detail as necessary without providing information that would result in competitive harm. Please provide analysis of the targets and goals considered by the compensation committee and not merely rely on statements such as those on page 28 that "[a]t the time the financial and operating goals were finalized for 2006, substantial uncertainty existed as to the actual attainment of goals."

6. In your discussion of company financial goals, you state that the percentage of financial measure achievement may range from 25% if the minimum level specified for each financial goal is achieved to 150% if the company achieved the maximum level specified for each financial goal. Disclose, to the extent applicable, the range of percentage achievement of the other two variables in your formula, key operating driver achievement and individual performance management objective achievement, and the weightings of the various operating drivers and management objectives. Also consider providing an example illustrating how you derived an officer's actual incentive award payout from each of his achievement measures, identifying each achievement measure's target payout, the officer's actual level of achievement for each measure and the corresponding payout in dollars and as a percentage of each achievement's target payout.

Committee Review Process, page 28

7. You state that the compensation committee may adjust the bonus levels based on achievement of corporate financial and operating goals, individual performance objectives, and other factors the committee determines appropriate. To the extent applicable, quantify the effect of the compensation committee's adjustment to incentive individual bonus payout calculated in accordance with your formula on page 27. For example, if known, disclose the percentage decrease in bonus amounts otherwise determine pursuant to the formula resulting from the compensation committee's February 2007 review of the company factors noted in the fourth whole paragraph on page 28.

Benefits, page 30

8. Expand your disclosure of the company's perquisite's program to include a more thorough discussion of why you chose to provide the perquisites discussed or how you have determined the amounts actually paid.

Employment and Post-Termination Agreements, page 31

9. Supplement your disclosure to discuss how you determined the appropriate payment and benefit levels under the various circumstances that trigger payments or provision of benefits. Please provide background on how you arrived at and determined such appropriate levels.

Nonemployee Director Compensation and Equity Awards Table, page 46

10. Footnote 2 to the stock awards column also appears to explain relevant detail in the option awards column. Please revise the options award column to reference footnote 2 as well.
11. Similar to your summary compensation table, include a footnote describing all assumptions made in the valuation of the stock and option awards granted to your directors by reference to a discussion of those assumptions in the footnotes to your financial statements included in your annual report on Form 10-K. See the instruction to Item 402(k), indicating that the instruction to 402(c)(2)(v) and (vi) applies equally to Item 402(k).

Please respond to our comments by September 21, 2007, or tell us by that time when you will provide us with a response.

We urge all persons who are responsible for the accuracy and adequacy of the disclosure in the filing to be certain that the filing includes all information required under the Securities Exchange Act of 1934 and that they have provided all information investors require for an informed investment decision. Since the company and its management are in possession of all facts relating to a company's disclosure, they are responsible for the accuracy and adequacy of the disclosures they have made.

When you respond to our comments, please provide, in writing, a statement from the company acknowledging that:

- the company is responsible for the adequacy and accuracy of the disclosure in the filing;
- staff comments or changes to disclosure in response to comments do not foreclose the Commission from taking any action with respect to the filing; and
- the company may not assert staff comments as a defense in any proceeding initiated by the Commission or any person under the federal securities laws of the United States.

In addition, please be advised that the Division of Enforcement has access to all information you provide to the staff of the Division of Corporation Finance in connection with our review of your filing or in response to comments.

Michael A. Mussallem
Edwards Lifesciences Corporation
August 21, 2007
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Please contact me at (202) 551-3444 with any questions.

Sincerely,

Perry J. Hindin
Special Counsel