

Mail Stop 0306

VIA MAIL and FACSIMILE 510.657.4476

February 8, 2007

Mr. Gabriel B. Vegh
Chairman, Chief Executive Officer, and
Acting Chief Financial Officer
Cardima, Inc.
47266 Benicia Street
Fremont, CA 94538-7330

**RE: Cardima, Inc.
Form 10-K for Fiscal Year Ended December 31, 2005
Filed May 5, 2006
Forms 10-QSB for the Quarterly Periods Ended June 30, and
September 30, 2006
File No. 000-22419**

Dear Mr. Vegh:

We have reviewed your response letter dated December 21, 2006 and filings and have the following comments. Where indicated, we think you should revise your documents in response to these comments. If you disagree, 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. In some of our comments, we may ask you to provide us with information so we may better understand your disclosure. After reviewing this information, we may raise additional comments.

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 filing. We look forward to working with you in these respects. We welcome any questions you may have about our comments or on any other aspect of our review. Feel free to call us at the telephone numbers listed at the end of this letter.

Form 10-K for the Fiscal Year Ended December 31, 2005

Item 9A. Controls and Procedures, page F-30

1. Please refer to prior comment 1. The proposed disclosure in Exhibit A to your response is not in sufficient detail for a reader to understand the nature of the material weaknesses. Please amend to address the following:
 - Disclose in greater detail the nature of the material weakness identified in your disclosure. In this regard, also revise to disclose the specific steps that the company has taken, if any, to remediate the material weakness and disclose whether the company believes that the material weakness still exists at the end of the period covered by the report.
 - Disclose when the material weakness was identified, by whom it was identified and when the material weakness first began.

Financial Statements, page F-1

Note 1. Nature of Business and Summary of Significant Accounting Policies, page F-8

- Reclassification of Previously Reported Financial Results, page F-8

2. Please refer to prior comments 2 and 3. We note from your response that “the original entry was not in accordance with GAAP, and that this was a correction of an accounting error and a misapplication of GAAP.” “Specifically, the impairment loss that was established was not in accordance with FASB 144 for determining the amount of the impairment.” Your proposed disclosure in Exhibit B to your response does not appear to provide all of the disclosures required by APB 20. Please amend the disclosure, consistent with paragraph 37 of APB 20, to disclose in sufficient detail the nature of the error in your previously filed financial statements. Please note that it is not appropriate to refer to this error as a “reclassification.” Please similarly revise your discussion in Note 1 of the error related to calculation of cost of sales in your September 30, 2006 Form 10-QSB.

Note 3. Short-Term Credit Obligations, page F-15

3. Please refer to prior comment 4. We note the proposed disclosure in Exhibit C of your response. Please revise so that your financial statements refer to and are based on accounting policies that comply with U.S. GAAP.

4. Please refer to prior comment 5. As previously requested, it is not clear how you allocated the transaction value between the freestanding warrant and the debt. Please tell us how you recorded and valued the transaction. Please include in your response the initial journal entry at August 28, 2005 and the subsequent journal entries supporting the balances from that date through December 31, 2005, March 31, June 30, and September 30, 2006.

Note 4. Stockholder's Equity, page F-21

5. Please refer to prior comment 6. Please disclose, similar to your response, the actual volatility and risk free interest rate used.

Form 10-QSB for the Quarterly Period Ended June 30, 2006

Financial Statements, page 3

Note 3. Debt Financing Transactions, page 9

6. Please refer to prior comment 12. We note that in addition to an extension of the maturity date of the note you agreed to increase the amount of the facility fee and the exit fee. You also lowered the exercise price of the old warrants and granted new warrants. Under EITF 96-19 you should "include all cash flows specified by the terms of the new debt instrument plus any amounts paid by the debtor to the creditor..."
 - Please revise your analysis to consider these amounts when calculating whether the present value of the cash flows of the new debt instrument are at least 10 percent different from the present value of the remaining cash flows under the terms of the original instrument as discussed in EITF 96-19, or tell us how your current calculation complies.
 - Finally, if you determine that the amounts are substantially different, then, consistent with EITF 96-19, the new debt instrument should be recorded initially at fair value and you should use that amount to determine the amount of the debt extinguishment gain or loss to recognize and the effective rate of the new instrument.
7. Please refer to prior comment 13. Your response only addresses your consideration of the warrants. As previously requested, please tell us how you considered SFAS 133 and EITF Issue 00-19 in evaluating whether the various features of the Apex convertible note, including for example the conversion feature of that note, are embedded derivatives that you should separate from the debt host, record as liabilities and account for at fair value under SFAS 133. In

this regard, discuss your conclusion on whether the note meets the definition of conventional convertible debt in paragraph 4 of EITF Issue 00-19. Please provide us with your analysis of each of these features under paragraphs 12-32 of EITF 00-19.

8. Please refer to prior comment 14. Your proposed revision does not, as previously requested, disclose the methodology and significant estimates used to value any of instruments you carry at fair value. Please revise in future filings.

Form 10-QSB for the Quarterly Period Ended September 30, 2006

Financial Statements, page 3

Statements of Cash Flows, page 5

9. Please tell us why, with reference to SFAS 95, you reflect the change in the warrant liability and the credit obligation as a change in operating assets and liabilities in determining your net cash used in operating activities.

Note 1. Interim Financial Information, page 6

Stock Options Expensed, page 6

10. Consistent with paragraph 84 of SFAS 123R, in future filings please provide for 2005 the tabular presentation of that was previously disclosed under paragraph 45 of Statement 123, or tell us why you are not required to provide this information.

Critical Accounting Policies and Estimates, page 7

11. In future filings please also discuss your valuation of warrants or tell us why you believe the current disclosure is complete.

Note 4. Debt Financing Transactions, page 8

12. Please refer to prior comment 10. Please tell us and disclose how you accounted for the additional monies loaned by Apex through June 30, 2006 and September 30, 2006 in those quarterly financial statements and tell us why. We note that the terms of the advances had not been finalized. Tell us the initial terms of the advances.

Controls and Procedures, page 14

13. We note your disclosure that your "Chief Executive Officer and Chief Financial Officer concluded that [y]our disclosure controls and procedures are effective to ensure that information required to be disclosed by us in the reports that we file or submit under the Exchange Act is recorded, processed, summarized and reported, within the time periods specified in the Commission's rules and forms." The language that is currently included after the word "effective" in your disclosure appears to be superfluous, since the meaning of "disclosure controls and procedures" is established by Rule 13a-15(e) of the Exchange Act. Please remove the language in your future filings or revise the disclosure in future filings so that the language that appears after the word "effective" is substantially similar in all material respects to the language that appears in the entire two-sentence definition of "disclosure controls and procedures" set forth in Rule 13a-15(e).
14. We note your statement that a control system "no matter how well conceived and operated, can provide only reasonable, not absolute, assurance that the objectives of the disclosure controls and procedures are met." Please revise future filings to state clearly, if true, that your disclosure controls and procedures are *designed to* provide reasonable assurance of achieving their objectives and that your principal executive officer and principal financial officer concluded that your disclosure controls and procedures are effective at that reasonable assurance level. In the alternative, remove the reference to the level of assurance of your disclosure controls and procedures. Please refer to Section II.F.4 of Management's Reports on Internal Control Over Financial Reporting and Certification of Disclosure in Exchange Act Periodic Reports, SEC Release No. 33-8238, available on our website at <<http://www.sec.gov/rules/final/33-8238.htm>>.

Gabriel B. Vegh
Cardima, Inc.
February 8, 2007
Page 6

As appropriate, please amend your filings and respond to these comments within 10 business days or tell us when you will provide us with a response. You may wish to provide us with marked copies of any amendment to expedite our review. Please furnish a cover letter with your amendment that keys your responses to our comments and provides any requested information. Detailed cover letters greatly facilitate our review. Please understand that we may have additional comments after reviewing your amendment and responses to our comments.

You may contact Kate Tillan, Assistant Chief Accountant, at (202) 551-3604, if you have questions regarding these comments. In this regard, do not hesitate to contact Brian Cascio, Accounting Branch Chief, at (202) 551-3676, or me, at (202) 551-3671 with any other concerns.

Sincerely,

Martin James
Senior Assistant Chief Accountant

cc (via fax) Richard A. Friedman, Esq. Sichenzia Ross Friedman Ference LLP
212.930.9725