

August 26, 2008

Mail Stop 6010

John R. Barr
President and Chief Executive Officer
AGA Medical Holdings, Inc.
5050 Nathan Lane North
Plymouth, MN 55442

**Re: AGA Medical Holdings, Inc.
Registration Statement on Form S-1
Filed August 8, 2008
File No. 333-151822**

Dear Mr. Barr:

We have reviewed your filing and have the following comments. Where indicated, we think you should revise your document 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 any other aspect of our review. Feel free to call us at the telephone numbers listed at the end of this letter.

Our Business, page 1

1. We note your response to prior comment 8; however, if you elect to highlight your sales for a particular period, you should provide an equally prominent GAAP-based measure of income. Please revise accordingly.
2. In response to comment 9, the materials you have provided at tab 4 appear to have been prepared for AGA's use. For example, the Mattson Jack Group report states on the cover it was prepared for by AGA Medical. If reports were commissioned by the registrant for use in the registration statement, please name the source in your prospectus disclosure and file consents.
3. We reissue the second bullet point of prior comment 9. Please briefly describe the length of time after such outcome and other hurdles that exist before you can bring such a product to market.

In Certain International Markets, page 16

4. With a view toward clarification of your disclosure regarding your transition to a direct sales force, we reissue prior comment 17 in part. Please tell us about the nature of the disputes with distributors.

Modifications, page 23

5. We reissue prior comment 20 which sought disclosure of whether you have made modifications that you believe do not require approval or clearance.

Industry Data, page 32

6. Please clarify what you mean by “adjusted for purchasing power.”

Management’s Discussion and Analysis, page 43

In-Process Research and Development, pages 47 and F-11

7. We refer to your response to prior comment number 29 in our letter dated July 17, 2008. Please tell us how the values assigned to each in-process research and development project discussed on page 47 totals the \$50.8 million charge recorded in 2005. In addition, disclose why you are not in a position to address material variances between projected and actual results as indicated in your response. Please disclose whether there have been material variances between projected and actual results on these projects.

Six Months Ended June 30, 2008, page 54

8. With a view toward clarified disclosure in an appropriate section of your document, please tell us why a customer would purchase your delivery system without purchasing an implant.

Year Ended December 31, 2007 Compared to Year Ended December 31, 2006

Net sales, page 56

9. We note your discussion on page 56 about the impact to net sales from the change in your product return policy. Please tell us where you have disclosed the change in your product return policy.

Cost of goods sold, page 56

10. Please disclose the reasons for the reduction in royalties given the increase in your net sales.

Critical Accounting Policies

Stock Based Compensation, page 51

Note 12. Stock Option Plan, page F-31

11. We refer to your response to prior comments 30 and 77 in our letter dated July 17, 2008. We also note that although it is not yet possible to determine the IPO price range you expect it to exceed the referred-to estimated fair value. You also reference significant factors contributing to the difference, including discounts for lack of liquidity and related to the negative effects of the outstanding Series A preferred stock liquidation preferences. If your IPO price is significantly higher than the fair values assigned please disclose specific reasons for the differences. If you have applied discounts to your estimates of fair value for stock options please disclose the amount of these discounts and how they were determined.
12. Please revise the disclosures on page 51 and in Note 12 on page F-31 to disclose the methodologies and assumptions you used to determine the fair value of your stock. In addition, tell us whether you have had discussions with your underwriters and when they were initiated about possible offering price ranges. Please tell us why your estimate of fair market value of \$2.75 has not changed in fiscal 2008 as the possibility of a public offering increased.

Corporate History, page 75

13. With a view towards disclosure, please tell us how and when you went from three shareholders at your founding in 1995 to two shareholders by the time of your July 2005 reorganization. Also tell us whether the “third partner” is currently involved with you.
14. Please reconcile your statement in the fourth paragraph that the Tranche B term loan was drawn in full with your response to prior comment 22 that credit commitments under the Tranche B term loan facility have not been drawn.
15. We note that you highlight your new agreement for distribution in China. With a view toward balanced disclosure, please tell us the material obligations of the parties to this agreement, its duration and termination provisions. Also tell us about the process and duration for government approval of the sale of your products in China.

Director Compensation, page 107

16. Please update the “Total” column to reflect your response to prior comment 38.

17. We note exhibits 10.9, 10.10, and 10.11 indicate the 45,000 options were to be issued over a period of years, yet your disclosure indicates they were all issued in 2006. Please revise or advise. In your response, please tell us whether the one-time option grants have a different exercise price when compared to the exercise price of annual grants.

Compensation Discussion and Analysis, Page 107

18. We note your reference to Welsh Carson's compensation policy in your response to prior comment 39 and your revised disclosure. Please disclose this policy.

Compensation Determination Process, page 108

19. With a view toward clarified disclosure regarding management's role in establishing its own compensation, please tell us who is involved with the "Company's management review" of the April 2008 evaluation and benchmarking mentioned in your response to prior comment 42. Also tell us what is involved with that "review," when it began, and what hurdles remain until it is presented to the compensation committee.

Base Salary, page 109

20. We note your response to prior comment 41. Please replace the vague disclosure regarding "strong performance against key attributes described above" with specific information regarding what was achieved and how those achievements resulted in the percentage increases disclosed.

Annual Cash Incentive Payments, Page 110

21. Your response to prior comment 43 that you "do not have a quantitative target" appears to be inconsistent with your current disclosure in this section which identifies "specific measurable goals" including "targeted financial results" and "targeted sales growth." If the decision to grant bonus payments was a subjective decision made by the compensation committee, please state that clearly without implying that objective factors are used. We reissue prior comment 43.

Employment Agreements, page 116

22. Please disclose the duration of the agreements.

Payments Upon Termination, page 120

23. Please disclose the material terms of exhibit 10.6, and discuss the terms of the agreement in your Compensation Discussion and Analysis.

Related-Party Transactions, page 124

24. From your disclosure on page 101, we note that Dr. Amplatz was a director during the period addressed by instruction 1 to Regulation S-K Item 404. Please tell us why the transactions with him and his family, like those mentioned in your response to prior comment 50, are not included in this section.

Dividends, page 126

25. Please clarify how “certain” April 2008 transactions generated a dividend payment.

Redemption, page 126

26. Please disclose the percentage of your company redeemed from Mr. Afremov and Mr. Gougeon. Also, describe the transactions in which payments were made to Mr. Gougeon in July 2005 as mentioned in the first paragraph on page 126.

Review, Approval or Ratification, page 126

27. We note your revisions in response to prior comment 52. Please disclose the standards to be applied to the review and approval of the transactions as required by Regulation S-K Item 404(b)(1)(ii).

Principal and Selling Stockholders, page 127

28. Please reconcile your response to prior comment 53 that no individuals beneficially own the shares held in the name of Welsh Carson with the list of individuals in footnote 1. Note that we are unable to agree with your interpretation of the no-action letter cited in your response to prior comment 53; therefore, your response to this comment should focus on the facts and circumstances of who has or shares, directly or indirectly, the voting or investment power for your shares held in the name of Welsh Carson.
29. We will evaluate your response to prior comment 57 when you provide the requested disclosure.

Underwriting, page 144

30. Please identify the “certain underwriters” mentioned in the disclosure added in response to prior comment 59.
31. Please tell us whether FINRA has concurred with your analysis in response 60, particularly given Rule 2720(n).

Financial Statements

Statements of Cash Flows, page F-7

32. Please revise the statement of cash flows on page F-8 to include the correct date for the interim period.

Note 2. 2005 Reorganization and Business Combination, page F-9

33. We refer to your response to prior comment number 63 in our letter dated July 17, 2008. Please expand your disclosures to clarify how you met the requirements of Section 1 of EITF 88-16, similar to the information provided in your response. You should also clarify how the new investors obtained unilateral control as defined in EITF 88-16 since only a 50% voting interest was acquired by new shareholders.
34. Please revise Note 2 to disclose the components of the \$283 million purchase price. In addition, disclose the values assigned to each of the intangible assets discussed on pages F-10 and F-11.
35. We refer to your response to prior comment number 66 in our letter dated July 17, 2008. We also note that you continue to disclose that acquired in-process research and development charges were estimated considering an appraisal. Please tell us about the nature and extent of the third party's involvement in your decision-making process associated with the referenced appraisal.

Note 3. Unaudited Pro Forma Stockholders' Deficit, page F-12

36. We refer to your response to prior comment number 67 in our letter dated July 17, 2008. Please revise to disclose the reason for the amounts in the pro forma stockholders' deficit column on page F-4 related to the Series A preferred stock and Class A common stock, similar to the discussion in your response.

Note 4. Acquisitions, page F-21

37. We note that you entered into an agreement on July 1, 2008 to purchase distribution rights, inventory and intangible assets from your distributor located in Poland. Please disclose the total purchase price and tell us whether this is the acquisition of a business or assets.

Note 13. Investment, page F-24

38. We refer to your response to prior comment 79 in our letter dated July 17, 2008. We note that your response addresses the Rule 3-09 test as it relates to your investment and the amounts included in your balance sheet. Please tell us the

amounts included in your statements of operations related to your equity investment in Ample Medical.

Note 15. Geographic Information, page F-34

39. We refer to your response to prior comment 81 in our letter dated July 17, 2008. We note your response addresses only the individual country portion of our comment. Please disclose the significant countries included in international sales as required by paragraph 38a of SFAS 131 or tell us why these disclosures are not required.

Recent Sales of Unregistered Securities, page II-2

40. We note your revisions in response to prior comment 84. Please disclose the facts relied upon to make the exemption under Section 4(2) available. In this regard, we note the number of stockholders in your revised principal stockholders' table and your response to prior comment 54 regarding their participation in the July 2005 transaction.
41. Please tell us how sales in 2005 mentioned in your table could have been made under your 2006 Equity Incentive Plan as disclosed in the paragraph after the table.

Report of Independent Registered Accounting Firm, Page S-1

42. Please revise to include Schedule II and the related Audit Report prior to the signature page.

Exhibits

43. Please tell us why the agreements mentioned in response 50 are not filed as exhibits to your registration statement.
44. Please file complete exhibits. For example, we note you have not included Exhibit A to Exhibit 4.4.
45. We note your reliance on an undated power of attorney. Please provide us your analysis of whether the lack of a date creates any ambiguity regarding the enforceability of the power of attorney. Cite any authority of which you rely.

As appropriate, please amend your registration statement in response to these comments. You may wish to provide us with marked copies of the 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.

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 Act of 1933 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.

Notwithstanding our comments, in the event the company requests acceleration of the effective date of the pending registration statement, it should furnish a letter, at the time of such request, acknowledging that:

- should the Commission or the staff, acting pursuant to delegated authority, declare the filing effective, it does not foreclose the Commission from taking any action with respect to the filing;
- the action of the Commission or the staff, acting pursuant to delegated authority, in declaring the filing effective, does not relieve the company from its full responsibility for the adequacy and accuracy of the disclosure in the filing; and
- the company may not assert staff comments and the declaration of effectiveness 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 our comments on your filing.

We will consider a written request for acceleration of the effective date of the registration statement as confirmation of the fact that those requesting acceleration are aware of their respective responsibilities under the Securities Act of 1933 and the Securities Exchange Act of 1934 as they relate to the proposed public offering of the securities specified in the above registration statement. We will act on the request and, pursuant to delegated authority, grant acceleration of the effective date.

We direct your attention to Rules 460 and 461 regarding requesting acceleration of a registration statement. Please allow adequate time after the filing of any amendment for further review before submitting a request for acceleration. Please provide this request at least two business days in advance of the requested effective date.

John R. Barr
AGA Medical Holdings, Inc.
August 26, 2008
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You may contact Jeanne Bennett at (202) 551-3606 or in her absence, Brian Cascio at (202) 551-3676 if you have questions regarding comments on the financial statements and related matters. Please contact Jay Mumford at (202) 551-3637 or me at (202) 551-3617 with any other questions.

Sincerely,

Russell Mancuso
Branch Chief

cc (via Fax): John B. Tehan, Esq.
Kenneth B. Wallach, Esq.