

Mail Stop 6010

September 8, 2006

Stefan M. Lemperle, M.D.  
Chief Executive Officer  
Artes Medical, Inc.  
5870 Pacific Center Boulevard  
San Diego, California 92121

**Re: Artes Medical, Inc.  
Amendment No. 2 to Registration Statement on Form S-1,  
filed August 7, 2006  
File No. 333-134086**

Dear Dr. Lemperle:

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 supplemental information so we may better understand your disclosure. After reviewing this information, we may or may not 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.

General

1. Throughout the prospectus you make the statement that based on your clinical data, the FDA has concluded that ArteFill is "safe and effective for the correction of nasolabial folds." This is not an appropriate statement since the premarket approval ("PMA") application for ArteFill remains under review by the FDA. This statement should be deleted throughout your prospectus until you receive final approval of your PMA application from the FDA.

Risk Factors, pages 8-30

“An investigation by the FDA or other regulatory agencies could impact our operations and financial condition.” Pages 9-10

2. Please revise this risk factor subheading to refer to the current open investigation by the FDA’s Office of Criminal Investigations and to describe specifically how it could impact the company.

“Our ability to manufacture and sell ArteFill could be harmed if we experience problems with the supply of calf hides . . . .” Page 16

3. If you have experienced problems in the past with your supply of calf hides, including but not limited to problems arising from contamination from BSE, please expand this risk factor to discuss these problems.

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As appropriate, please amend your filing 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 supplemental information. Detailed cover letters greatly facilitate our review. Please furnish your cover letter to us via EDGAR under the form type label CORRESP. Please understand that we may have additional comments after reviewing your amendment and responses to our comments.

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.

Stefan M. Lemperle, M.D.  
Artes Medical, Inc.  
September 8, 2006  
Page 3

You may contact Vanessa Robertson at (202) 551-3649 or Oscar Young at (202) 551-3622 if you have questions regarding comments on the financial statements and related matters. Please contact Sonia Barros at (202) 551-3655 or John Krug at (202) 551-3862 with any other questions.

Sincerely,

Jeffrey P. Riedler  
Assistant Director

cc: Craig S. Andrews  
Jeffrey C. Thacker  
Heller Ehrman LLP  
4350 La Jolla Village Drive, Seventh Floor  
San Diego, California 92122