



UNITED STATES  
SECURITIES AND EXCHANGE COMMISSION  
WASHINGTON, D.C. 20549

February 19, 2009

Mail Stop 7010

**Via U.S. mail**

William Doyle  
Chief Executive Officer  
Vystar Corporation  
3235 Satellite Boulevard  
Building 400, Suite 290  
Duluth, GA 30096

Re: **Vystar Corporation**  
**Registration Statement on Form S-1 Amendment No.1**  
**Filed on: February 11, 2009**  
**File No.: 333-155341**

Dear Mr. Doyle:

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. 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. Comments regarding your new confidential treatment request related to the agreement filed as Exhibit 10.2 to the registration statement will be sent under separate cover. Please note that we will not be in a position to consider a request for acceleration of effectiveness of the registration statement until we resolve all issues concerning the confidential treatment request.
2. We note your revised disclosures in response to comments 2 and 19 of our December 8, 2008 comment letter. Please revise your disclosures to identify UCM and UCM Stockholders as statutory underwriters and remove the language "may be deemed" from the disclosure.

Outside Front Cover of Prospectus

3. We note your revised disclosure in response to our prior comment 9. Please be advised that since the offering of the 600,000 shares of Vystar's common stock represents a primary offering, these 600,000 shares would have to be offered and sold at a fixed price for the entire duration of the offering. Please revise your disclosure to clarify that these securities will only be offered and sold at a fixed price. For additional guidance please see Section 612, Item 612.14 of the Compliance and Disclosure Interpretations related to Securities Act Rules.

Plan of Distribution, page 10

4. We note that you intend to keep the prospectus effective until the earlier of "(i) six (6) months from the effective date of the distribution of Vystar common stock to the UCM Stockholders, or (ii) such time that all of the shares held by such UCM Stockholders have been sold pursuant to the prospectus or Rule 144 under the Securities Act or any rule of similar effect."

Please be advised that since the distribution of the 600,000 shares of Vystar's common stock represents a primary offering and the UCM Stockholders are considered to be statutory underwriters in connection therewith, the UCM Stockholders may not rely on Rule 144 for the sale of any of the securities that they will receive in the distribution. Please revise the registration statement to remove all disclosures that directly or indirectly would lead an investor to conclude that the 600,000 shares may be sold in reliance of Rule 144.

Business, page 19

Products and Services (Vytex NRL), page 20

5. Please briefly describe what ASTM International is (i.e. formerly known as American Society for Testing Materials, an open forum for the development of international standards).

Management, page 40

6. We note your revised disclosure in response to comment 36 of our December 8, 2008 letter; however, it appears that the biographical information for Mr. Clark and Ms. Ely is incomplete. Please revise your disclosure to provide employment information for Mr. Clark for the period starting in 2000 through 2006 and identify the years during which Ms. Ely worked for Coloplast Corp. and/or Agfa.

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 disclosure 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

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request at least two business days in advance of the requested effective date.

You may contact Melinda Hooker, Staff Accountant, at (202) 551-3732 or John Cash, Accounting Branch Chief, at (202) 551-3768 if you have questions regarding comments on the financial statements and related matters. Please contact Era Anagnosti, Staff Attorney, at (202) 551-3369 or me at (202) 551-3760 with any other questions.

Sincerely,

Pamela A. Long  
Assistant Director

cc: Gerald L. Baxter, Esq. (via facsimile @ (678) 553-2431)  
Greenberg Traurig, LLP  
3290 Northside Parkway, Suite 400  
Atlanta, GA 30327