



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

June 18, 2009

Mail Stop 4631

**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.2**  
**Filed on: May 29, 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. We note that you are registering the sale of 1,400,000 shares by the Honeycutts, which amount represents a large percentage of the total number of shares outstanding and the number of shares outstanding held by non-affiliates. Given the size of the offering and the Honeycutts affiliate status as significant large stockholders, please provide us with your legal analysis as to why the sale of the shares by the Honeycutts should be regarded as a secondary offering that is eligible to be made on a delayed or continuous basis under Rule 415(a)(1)(i) of Regulation C, rather than a primary offering where the Honeycutts are actually underwriters selling on behalf of the issuer. For additional guidance please see Section 612, Item 612.09 of the Compliance and Disclosure Interpretations related to Securities Act Rules. You can find our Compliance and Disclosure Interpretations on the Commission's website at <http://www.sec.gov/divisions/corpfin/guidance/securitiesactrules-interps.htm>. We may have additional comments upon review of your response.

2. We note that you have recently changed your independent accountants. Please amend your filing to include the disclosures required by Item 304 of Regulation S-K.

Outside Cover of Prospectus

3. Please disclose here that until a market for your shares of common stock is developed or until the company's shares are quoted on the OTCBB, the price per share being offered by the selling shareholders will be fixed at \$2.00.

Selling Shareholders, page 9

4. In the first paragraph of this section, please explain the correlation between Mr. Honeycutt's registering of the shares for resale and the transferring of 50% of his shares to his spouse.
5. We note your bullet point disclosure on top of page 10; however, we are unable to locate relevant disclosure related to the shares being offered by the other selling stockholders. Please explain how the shares being offered by the selling shareholders (other than Mr. and Mrs. Honeycutt) were issued, and to the extent applicable, please describe the material terms of the agreement(s) pursuant to which these shares were issued, the aggregate proceeds to the company and whether these shares have any registration or other similar rights. Please file any agreement associated with these shares as an exhibit pursuant to Item 601(b)(4) of Regulation S-K.

Plan of Distribution, page 11

6. Please revise your disclosure to state that the sales of common stock covered by the registration statement will be at a fixed price until a public market for your shares is established.

Management, page 41

7. Please add Ms. Hamock as the company's CFO in the tabular disclosure at the top of page 41.

Exhibit 5.1 - Legal Opinion of Greenberg Traurig LLP, page II-5

8. Language in the opinion that limits an investor's reliance on the legal opinion is inappropriate. Please have counsel revise the opinion to remove such language.

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