



DIVISION OF
CORPORATION FINANCE

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

June 19, 2012

Via E-Mail

Steven C. Quay, M.D., Ph.D.
Chairman, Chief Executive Officer and President
Atossa Genetics Inc.
4105 E. Madison Street, Suite 320
Seattle, Washington 98112

**Re: Atossa Genetics Inc.
Amendment no. 4 to Registration Statement on Form S-1
Filed June 18, 2012
File No. 333-179500**

Dear Dr. Quay:

We have reviewed your registration statement and have the following comments. In some of our comments, we may ask you to provide us with information so we may better understand your disclosure.

Please respond to this letter by amending your registration statement and providing the requested information. If you do not believe our comments apply to your facts and circumstances or do not believe an amendment is appropriate, please tell us why in your response.

After reviewing any amendment to your registration statement and the information you provide in response to these comments, we may have additional comments.

Our Diagnostic Tests, page 2

1. While we note your response to prior comment 4, please further revise to disclose whether present methods of analyzing traditional biopsy specimens could be used to achieve results similar to or better than those provided by your tests.
2. We note your response to prior comment 5. With a view to disclosure, please describe the additional technology that you hold an option to license from Oslo. Please also clarify the significance of the additional technology to the operation or future development of your existing technology.

Plan of Distribution, page 87

3. Revise the final sentence of the second paragraph of this section to clarify the circumstances under which you would choose not to complete the offering. Similarly,

please revise the same sentence to describe the factors that would cause you not to accept an investment.

Consolidated Statements of Operations, page F-23

4. Please revise the statement of operations to reclassify Loss on Reduction of Inventory to LCM from operating expenses to gross profit.

Exhibit 10.27

5. We note your response to prior comment 16 states that the “blood collection system” is 510(k) exempt. Please revise your response to clarify why the agreement states that the kits and supplies “are not approved by the FDA and must not be used for diagnostic purposes.” To the extent that relevant events occurred after the supply agreement was entered into, please so state.

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 the information the Securities Act of 1933 and all applicable Securities Act rules require. 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 you request acceleration of the effective date of the pending registration statement please provide a written statement from the company 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.

Please refer to Rules 460 and 461 regarding requests for acceleration. 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. Please allow

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adequate time for us to review any amendment prior to the requested effective date of the registration statement.

You may contact Kristin Lochhead at (202) 551-3664 or Brian Cascio, Accounting Branch Chief, at (202) 551-3676 if you have questions regarding comments on the financial statements and related matters. Please contact Allicia Lam at (202) 551-3316 or Daniel Morris, Special Counsel, at (202) 551-3314 with any other questions.

Sincerely,

/s/ Daniel Morris for

Amanda Ravitz
Assistant Director

cc (by e-mail): Ryan Murr
Ropes & Gray LLP