

April 23, 2018

VIA EDGAR

U.S. Securities and Exchange Commission
Division of Corporation Finance
100 F. Street, N.E.
Washington, D.C. 20549
Attention: Ada D. Sarmento

Re: Atossa Genetics Inc.

**Registration Statement on Form S-1
Filed March 27, 2018
File No. 333-223949**

Dear Ms. Sarmento:

This letter is being submitted on behalf of Atossa Genetics Inc. (the "Company") to describe the changes to Registration Statement on Form S-1, File No. 333-223949 (the "Registration Statement") made in Amendment No. 1 to the Registration Statement, and information or materials being provided, in response to the comments of the staff of the Division of Corporation Finance (the "Staff") of the Securities and Exchange Commission (the "Commission") in a letter to the Company dated April 6, 2018 addressed to Steven Quay.

For your convenience, each of the Staff's numbered comments has been set forth in italics, and the response to each comment appears immediately after the comment.

Registration Statement on Form S-1
Material U.S. Federal Income Tax Consequences, page 35

- 1. We note your belief that the receipt of subscription rights pursuant to the rights offering should not be treated as a taxable distribution for U.S. federal income tax purposes. A tax opinion must be filed whenever the tax consequences of a transaction are material to an investor and a representation as to tax consequences is set forth in the filing. Please file a tax opinion as an exhibit to the filing pursuant to Item 601(b)(8) of Regulation S-K and update the tax disclosure in the prospectus accordingly. For guidance, please refer to Section III.A.2, including footnote 39, of Staff Legal Bulletin No. 19 (October 14, 2011).*

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April 23, 2018

Page 2

RESPONSE:

We have included a tax opinion as Exhibit 8.1 to Amendment No. 1 to the Registration Statement and updated the tax disclosure accordingly.

Information Incorporated by Reference, page 51

2. *Please incorporate by reference Item 8.01 of your Current Reports on Form 8-K filed on February 1 and February 21, 2018. Please also incorporate by reference your Definitive Proxy Statement on Schedule 14A filed on March 20, 2018. Refer to Item 12(a)(2) of Form S-1 for guidance.*

RESPONSE:

We have updated this section in Amendment No. 1 to the Registration Statement to include the requested Current Reports on Form 8-K and Definitive Proxy Statement on Schedule 14A. We have also included subsequent Forms 8-K that have been filed since the date of your previous letter.

If you have any questions concerning anything that is said above or about anything else relating to the Registration Statement, please contact the undersigned by phone at 415-393-8373 or by email at rmurr@gibsondunn.com.

Sincerely,

/s/ Ryan A. Murr

Ryan A. Murr

Enclosures

cc: Erin Jaskot