

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

FORM S-8
REGISTRATION STATEMENT UNDER
THE SECURITIES ACT OF 1933

ATOSSA GENETICS INC.

(Exact Name of Registrant as Specified in its Charter)

Delaware
(State or Other Jurisdiction
of Incorporation or Organization)

26-4753208
(I.R.S. Employer Identification No.)

1616 Eastlake Ave. East, Suite 510
Seattle, Washington 98102
(Address of Principal Executive Offices)

2010 STOCK OPTION AND INCENTIVE PLAN, AS AMENDED*
INDUCEMENT OPTION GRANTS OUTSIDE OF A PLAN
(Full Title of the Plan)

***See Explanatory Note on Following Page**

Kyle Guse
Chief Financial Officer,
General Counsel and Secretary
1616 Eastlake Ave. East, Suite 510
Seattle, Washington 98102
(Name and address of agent for service)

Telephone: (800) 351-3902
(Telephone number, including area code, of agent for service)

Copy to:
Ryan A. Murr
ROPES & GRAY LLP
Three Embarcadero Center, 3rd Floor
San Francisco, California 94111
Telephone: (415) 315-6300
Facsimile: (415) 315-6026

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, or a smaller reporting company. See the definitions of "large accelerated filer," "accelerated filer" and "smaller reporting company" in Rule 12b-2 of the Exchange Act. (Check one):

Large accelerated filer

Accelerated filer

Non-accelerated filer
(Do not check if a smaller reporting company)

Smaller reporting company

CALCULATION OF REGISTRATION FEE

Title of securities To be registered	Amount to be registered(1)	Proposed maximum offering price per share	Proposed maximum aggregate offering price	Amount of registration fee
Common Stock, par value \$0.001 per share	1,259,747	\$ 2.32 (2)	\$ 2,922,613.04	\$376.43
Common Stock, par value \$0.001 per share	200,000 (3)	\$ 4.11	\$ 822,000	\$112.12
Common Stock, par value \$0.001 per share	405,000 (4)	\$ 4.11	\$ 1,664,550	\$227.04
Common Stock, par value \$0.001 per share	163,000 (5)	\$ 4.58	\$ 746,540	\$101.83
TOTALS	2,027,747		\$ 6,155,703.04	\$817.42

- (1) Pursuant to Rule 416(a) of the Securities Act of 1933, as amended (the "**Securities Act**"), this registration statement also covers any additional shares of common stock that become issuable under the 2010 Stock Option and Incentive Plan, as amended, or the standalone inducement options by reason of any stock split, stock dividend or similar transaction effected without the receipt of consideration which results in an increase in the number of the Registrant's outstanding shares of common stock.
 - (2) Estimated solely for the purpose of calculating the registration fee pursuant to Rule 457 of the Securities Act, and based on the average of the high and low sale prices of the Registrant's common stock, as reported on the Nasdaq Capital Market, on February 10, 2014.
 - (3) Represents shares of common stock reserved for issuance upon the exercise of inducement options granted on December 20, 2012 to Christopher Destro in connection with his employment.
 - (4) Represents shares of common stock reserved for issuance upon the exercise of inducement options granted on January 4, 2013 to Kyle Guse in connection with his employment.
 - (5) Represents shares of common stock reserved for issuance upon the exercise of inducement options granted on June 3, 2013 to Peter Carbonaro in connection with his employment.
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EXPLANATORY NOTE

This Registration Statement registers: (1) 516,774 shares of common stock issuable under the registrant's 2010 Stock Option and Incentive Plan, as amended (the "**Plan**"), which shares represent the "evergreen" increase under the Plan on January 1, 2013; (2) 742,973 shares of common stock issuable under the Plan, which shares represent the "evergreen" increase under the Plan on January 1, 2014; (3) 200,000 shares reserved for issuance upon the exercise of inducement options granted on December 20, 2012 to Christopher Destro in connection with his employment; (4) 405,000 shares reserved for issuance upon the exercise of inducement options granted on January 4, 2013 to Kyle Guse in connection with his employment; and (5) 163,000 shares reserved for issuance upon the exercise of inducement options granted on June 3, 2013 to Peter Carbonaro in connection with his employment.

PART I

As permitted by Rule 428 under the Securities Act, this Registration Statement omits the information specified in Part I of Form S-8. The documents containing the information specified in Part I will be delivered to the participants of the Plan as required by Rule 428(b).

PART II

INFORMATION REQUIRED IN THE REGISTRATION STATEMENT

Item 3. Incorporation of Documents by Reference.

The following documents filed by Atossa Genetics Inc. (the "**Registrant**") with the Securities and Exchange Commission ("**SEC**") are incorporated by reference into this Registration Statement:

(a) The Company's Annual Report on Form 10-K for the fiscal year ended December 31, 2012, filed with the SEC on March 28, 2013;

(b) The Company's Quarterly Reports on Form 10-Q for the fiscal quarters ended March 31, 2013, June 30, 2013 and September 30, 2013, filed with the SEC on May 15, 2013, August 14, 2013 and November 12, 2013, respectively;

(c) The Company's Current Reports on Form 8-K filed with the SEC on January 4, 2013, February 25, 2013, February 28, 2013, March 13, 2013, May 9, 2013 (as amended on August 15, 2013), October 4, 2013, October 15, 2013, December 16, 2013, December 19, 2013, January 24, 2014 and February 5, 2014 (in each case, not including any information furnished under Items 2.02 or 7.01 of Form 8-K, including the related exhibits, which information is not incorporated by reference herein, unless such Form 8-K expressly provides to the contrary);

(d) The Company's Definitive Proxy Statement on Schedule 14A, filed with the SEC on April 15, 2013;

(e) The description of the Registrant's common stock which is contained in the Registrant's Registration Statement on Form 8-A filed on July 24, 2012 (File No. 001-35610) under the Exchange Act of 1934, as amended (the "**Exchange Act**"), including any amendment or report filed for the purpose of updating such description; and

(f) All documents subsequently filed by the Registrant pursuant to Sections 13(a), 13(c), 14 and 15(d) of the Exchange Act, prior to the filing of a post-effective amendment which indicates that all securities offered hereby have been sold or which deregisters all securities then remaining unsold.

Any statement contained in a document incorporated or deemed to be incorporated by reference herein shall be deemed to be modified or superseded for purposes of this registration statement to the extent that a statement contained herein or in any other subsequently filed document which also is or is deemed to be incorporated by reference herein modifies or supersedes such statement. Any such statement so modified or superseded shall not be deemed, except as so modified or superseded, to constitute a part of this registration statement.

Item 4. Description of Securities.

Not applicable.

Item 5. Interests of Named Experts and Counsel.

Not applicable.

Item 6. Indemnification of Directors and Officers.

Section 145 of the Delaware General Corporation Law (the “*DGCL*”), authorizes a corporation to indemnify its directors and officers against liabilities arising out of actions, suits and proceedings to which they are made or threatened to be made a party by reason of the fact that they have served or are currently serving as a director or officer to a corporation. The indemnity may cover expenses (including attorneys’ fees) judgments, fines and amounts paid in settlement actually and reasonably incurred by the director or officer in connection with any such action, suit or proceeding. Section 145 permits corporations to pay expenses (including attorneys’ fees) incurred by directors and officers in advance of the final disposition of such action, suit or proceeding. In addition, Section 145 provides that a corporation has the power to purchase and maintain insurance on behalf of its directors and officers against any liability asserted against them and incurred by them in their capacity as a director or officer, or arising out of their status as such, whether or not the corporation would have the power to indemnify the director or officer against such liability under Section 145.

The Registrant has adopted provisions in its certificate of incorporation and bylaws that limit or eliminate the personal liability of its directors to the fullest extent permitted by the *DGCL*, as it now exists or may in the future be amended. Consequently, a director will not be personally liable to the Registrant or its stockholders for monetary damages or breach of fiduciary duty as a director, except for liability for:

- any breach of the director’s duty of loyalty to the Registrant or its stockholders;
- any act or omission not in good faith or that involves intentional misconduct or a knowing violation of law;
- any unlawful payments related to dividends or unlawful stock purchases, redemptions or other distributions; or
- any transaction from which the director derived an improper personal benefit.

These limitations of liability do not alter director liability under the federal securities laws and do not affect the availability of equitable remedies such as an injunction or rescission.

In addition, the Registrant’s bylaws provide that:

- the Registrant will indemnify its directors, officers and, in the discretion of the Board of Directors, certain employees to the fullest extent permitted by the *DGCL*, as it now exists or may in the future be amended; and
- the Registrant will advance reasonable expenses, including attorneys’ fees, to its directors and, in the discretion of the Board of Directors, to its officers and certain employees, in connection with legal proceedings relating to their service for or on behalf of the Registrant, subject to limited exceptions.

The Registrant has entered into indemnification agreements with each of its directors and certain of its executive officers. These agreements provide that the Registrant will indemnify each of these directors and executive officers to the fullest extent permitted by Delaware law. The Registrant will advance expenses, including attorneys’ fees, judgments, fines and settlement amounts, to each indemnified director, executive officer or affiliate in connection with any proceeding in which indemnification is available and will indemnify its directors and officers for any action or proceeding arising out of that person’s services as an officer or director brought on behalf of the Registrant or in furtherance of the Registrant’s rights.

The Registrant maintains general liability insurance that covers certain liabilities of its directors and officers arising out of claims based on acts or omissions in their capacities as directors or officers, including liabilities under the Securities Act.

Item 7. Exemption from Registration Claimed.

Not applicable.

Item 8. Exhibits.

See the Index to Exhibits following the signature page.

Item 9. Undertakings.

The undersigned Registrant hereby undertakes:

1. To file, during any period in which offers or sales are being made, a post-effective amendment to this Registration Statement:

(i) To include any prospectus required by Section 10(a)(3) of the Securities Act;

(ii) To reflect in the prospectus any facts or events arising after the effective date of the Registration Statement (or the most recent post-effective amendment thereof) which, individually or in the aggregate, represent a fundamental change in the information set forth in the Registration Statement. Notwithstanding the foregoing, any increase or decrease in volume of securities offered (if the total dollar value of securities offered would not exceed that which was registered) and any deviation from the low or high end of the estimated maximum offering range may be reflected in the form of prospectus filed with the Securities and Exchange Commission (the "**Commission**") pursuant to Rule 424(b) if, in the aggregate, the changes in volume and price represent no more than a 20% change in the maximum aggregate offering price set forth in the "Calculation of Registration Fee" table in the effective registration statement.

(iii) To include any material information with respect to the plan of distribution not previously disclosed in the Registration Statement or any material change to such information in the Registration Statement;

Provided, however, that paragraphs (1)(i) and (1)(ii) do not apply if the information required to be included in a post-effective amendment by those paragraphs is contained in reports filed with or furnished to the Commission by the Registrant pursuant to Section 13 or Section 15(d) of the Exchange Act that are incorporated by reference in the Registration Statement.

2. That, for the purpose of determining any liability under the Securities Act, each such post-effective amendment shall be deemed to be a new registration statement relating to the securities offered herein, and the offering of such securities at that time shall be deemed to be the initial bona fide offering thereof.

3. To remove from registration by means of a post-effective amendment any of the securities being registered which remain unsold at the termination of the offering.

The undersigned Registrant hereby undertakes that, for purposes of determining any liability under the Securities Act, each filing of the Registrant's annual report pursuant to Section 13(a) or Section 15(d) of the Exchange Act (and, where applicable, each filing of an employee benefit plan's annual report pursuant to Section 15(d) of the Exchange Act) that is incorporated by reference in the Registration Statement shall be deemed to be a new registration statement relating to the securities offered herein, and the offering of such securities at that time shall be deemed to be the initial bona fide offering thereof.

Insofar as indemnification for liabilities arising under the Securities Act may be permitted to directors, officers and controlling persons of the Registrant pursuant to the foregoing provisions, or otherwise, the Registrant has been advised that in the opinion of the Commission such indemnification is against public policy as expressed in the Securities Act and is, therefore, unenforceable. In the event that a claim for indemnification against such liabilities (other than the payment by the Registrant of expenses incurred or paid by a director, officer or controlling person of the Registrant in the successful defense of any action, suit or proceeding) is asserted by such director, officer or controlling person in connection with the securities being registered, the Registrant will, unless in the opinion of its counsel the matter has been settled by controlling precedent, submit to a court of appropriate jurisdiction the question whether such indemnification by it is against public policy as expressed in the Securities Act and will be governed by the final adjudication of such issue.

EXHIBIT INDEX

Exhibit No.	Description	Incorporated by Reference Herein	
		Form	Date
4.1	Amended and Restated Certificate of Incorporation of Atossa Genetics Inc.	Registration Statement on Form S-1, as Exhibit 3.2	June 11, 2012
4.2	Amended and Restated Bylaws of Atossa Genetics Inc.	Registration Statement on Form S-1, as Exhibit 3.4	June 11, 2012
4.3	Amendment to the Bylaws of Atossa Genetics Inc.	Current Report on Form 8-K, as Exhibit 3.1	December 20, 2012
4.4	Form of specimen certificate for common stock	Registration Statement on Form S-1, as Exhibit 4.1	May 21, 2012
5.1	Opinion of Ropes & Gray LLP	Filed herewith	
23.1	Consent of KCCW Accountancy Corp.	Filed herewith	
23.2	Consent of Ropes & Gray LLP	Filed as part of Exhibit 5.1	
24.1	Powers of Attorney	Included on the signature page in Part II	
99.1	Atossa Genetics Inc. 2010 Stock Option and Incentive Plan, as amended	Registration Statement on Form S-1, as Exhibit 10.6	June 11, 2012
99.2	Form of Incentive Stock Option Agreement	Registration Statement on Form S-1, as Exhibit 10.7	June 11, 2012
99.3	Form of Non-Qualified Stock Option Agreement for Employees	Registration Statement on Form S-1, as Exhibit 10.8	June 11, 2012
99.4	Form of Non-Qualified Stock Option Agreement for Non-Employee Directors	Registration Statement on Form S-1, as Exhibit 10.9	June 11, 2012
99.5	Form of Restricted Stock Award Agreement	Registration Statement on Form S-1, as Exhibit 10.13	June 11, 2012

February 14, 2014

Atossa Genetics Inc.
1616 Eastlake Ave. East, Suite 510
Seattle, Washington 98102

Ladies and Gentlemen:

This opinion letter is furnished to you in connection with a registration statement on Form S-8 (the "Registration Statement"), filed by Atossa Genetics Inc., a Delaware corporation (the "Company"), on the date hereof, with the Securities and Exchange Commission under the Securities Act of 1933, as amended (the "Securities Act"), for the registration of an aggregate of 2,027,747 shares of the Company's Common Stock (the "Shares"). 1,259,747 of the Shares are issuable under the Company's 2010 Stock Option and Incentive Plan, as amended (the "Plan") and 768,000 of the Shares were granted to certain employees as inducement awards in connection with such employees' employment (collectively, the "Inducement Awards").

We are familiar with the actions taken by the Company in connection with the adoption of the Plan and the Inducement Award grants. We have examined such certificates, documents and records and have made such investigation of fact and such examination of law as we have deemed appropriate in order to enable us to render the opinion set forth herein. In conducting such investigation, we have relied, without independent verification, upon certificates of officers of the Company.

The opinion expressed below is limited to the Delaware General Corporation Law.

For purposes of the opinion expressed below, we have assumed that a sufficient number of authorized but unissued shares of the Company's Common Stock will be available for issuance when the Shares are issued.

Based upon and subject to the foregoing, we are of the opinion that the Shares have been duly authorized and, when the Shares have been issued and sold in accordance with the terms of the Plan or the respective Inducement Awards, the Shares will be validly issued, fully paid and nonassessable.

We hereby consent to the filing of this opinion letter as an exhibit to the Registration Statement. In giving such consent, we do not thereby admit that we are in the category of persons whose consent is required under Section 7 of the Securities Act or the rules and regulations thereunder.

Very truly yours,

/s/ Ropes & Gray LLP

Ropes & Gray LLP

CONSENT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

We hereby consent to the incorporation by reference in this Registration Statement on Form S-8 of Atossa Genetics Inc. (a development stage company) of our report dated March 27, 2013 relating to the consolidated financial statements as of and for the years ended December 31, 2012 and 2011 appearing in its Annual Report on Form 10-K.

/s/ KCCW Accountancy Corp.

Diamond Bar, California
February 14, 2014
