

**UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
Washington, D.C. 20549**

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

International Stem Cell Corporation

(Exact name of registrant as specified in its charter)

Delaware
(State or other jurisdiction of
incorporation or organization)

20-4494098
(I.R.S. employer
identification no.)

**2595 Jason Court
Oceanside, CA 92056**
(Address of principal executive offices) (Zip code)

Stock Option Agreements
(Full title of the plan)

**Ray Wood
Chief Financial Officer
2595 Jason Court
Oceanside, CA 92056**
(Name and address of agent for service)

Telephone number, including area code, of agent for service: (760) 940-6383

This registration statement shall hereafter become effective in accordance with Rule 462 promulgated under the Securities Act of 1933, as amended (the "Securities Act").

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 Securities Exchange Act of 1934, as amended (the “Exchange Act”).

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 unit	Proposed maximum aggregate offering price	Amount of registration fee
Common Stock par value \$0.001	8,620,715	\$0.70	\$6,034,500.50	\$430.30
Common Stock par value \$0.001	1,636,878	\$0.59	\$965,758.02	\$68.86
TOTAL	10,257,593			\$499.16

¹

Pursuant to Rule 416(a) under the Securities Act, this registration statement also covers any additional securities that may be offered or issued in connection with any stock split, stock dividend or similar transaction.

PART I

Not required to be included in this registration statement pursuant to introductory Note to Part I of Form S-8.

PART II

INFORMATION REQUIRED IN THE REGISTRATION STATEMENT

Item 3. Incorporation of Documents by Reference

International Stem Cell Corporation (the "Company") hereby incorporates by reference in this registration statement the following documents:

(a) The Company's annual report on Form 10-K filed pursuant to Sections 13(a) or 15(d) of the Exchange Act, containing audited financial statements for the Company's fiscal year ended December 31, 2008, as filed with the Securities and Exchange Commission on March 30, 2009.

(b) All other reports filed pursuant to Section 13(a) or 15(d) of the Exchange Act since the end of the fiscal year covered by the registrant document referred to in (a) above.

(c) Description of the Company's Common Stock contained or incorporated in the registration statements filed by the Company under the Exchange Act, including any amendments or reports filed for the purpose of updating such description.

All documents subsequently filed by the Company pursuant to Sections 13(a), 13(c), 14 and 15(d) of the Exchange Act, prior to the filing of a post-effective amendment to this registration statement which indicates that all securities offered hereby have been sold or which deregisters all securities remaining unsold, shall be deemed to be incorporated by reference in this registration statement and to be a part hereof from the date of filing of such documents.

Item 4. Description of Securities

The class of securities to be offered is registered under Section 12 of the Exchange Act.

Item 5. Interests of Named Experts and Counsel

Inapplicable.

Item 6. Indemnification of Directors and Officers

Section 145 of the Delaware General Corporation Law authorizes a court to award, or a corporation's board of directors to grant, indemnity to directors and officer in terms sufficiently broad to permit such indemnification under certain circumstances for liabilities (including reimbursement for expenses incurred) arising under the Securities Act.

As permitted by the Delaware General Corporation Law, the Company's certificate of incorporation includes a provision to indemnify any and all persons it has power to indemnify under such law from and against any and all of the expenses, liabilities or other matters referred to in or covered by such law. In addition, the Company's certificate of incorporation includes a provision whereby the Company shall indemnify each of the Company's directors and officers in each and every situation where, under the Delaware General Corporation law the Company is not obligated, but is permitted or empowered to make such indemnification, except as otherwise set forth in the Company's bylaws. The Company's certificate of incorporation also includes a provision which eliminates the personal liabilities of its directors for monetary damages for breach of fiduciary duty as a director, except for liability (1) for any breach of the director's duty of loyalty to the Company or its stockholders, (2) for acts or omissions not in good faith or that involve intentional misconduct or a knowing violation of law, (3) under Section 174 of the Delaware General Corporation Law or (4) for any transaction from which the director derived an improper personal benefit.

As permitted by the Delaware General Corporation Law, the Company's bylaws provide that (1) it is required to indemnify its directors to the fullest extent permitted by the Delaware General Corporation Law and may, if and to the extent authorized by the Board of Directors, indemnify its officers, employees or agents and any other person whom it has the power to indemnify against liability, reasonable expense or other matters and (2) the Company shall advance expenses to its directors and officers who are entitled to indemnification, as incurred, to its directors and officers in connection with a legal proceeding, subject to limited exceptions.

Item 7. **Exemption From Registration Claimed**

Inapplicable.

Item 8. **Exhibits**

See Exhibit Index.

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;

(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 (a)(1)(i) and (a)(1)(ii) do not apply if the registration statement is on Form S-3 or Form S-8, and the information required to be included in a post-effective amendment by those paragraphs is contained in periodic reports filed 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 therein, 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 therein, 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 Securities and Exchange 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.

SIGNATURE

Pursuant to the requirements of the Securities Act of 1933, as amended, the registrant certifies that it has reasonable grounds to believe that it meets all of the requirements for filing on Form S-8 and has duly caused this registration statement to be signed on its behalf by the undersigned, thereunto duly authorized, in Oceanside, California, on January 27, 2010.

INTERNATIONAL STEM CELL CORPORATION

By: /s/ RAY WOOD
Ray Wood
Chief Financial Officer

POWER OF ATTORNEY

KNOW ALL PERSONS BY THESE PRESENTS, that each person whose signature appears below constitutes and appoints Andrey Semechkin and Ray Wood, as his or her attorney-in-fact, each with full power of substitution, for him or her in any and all capacities, to sign any amendments to this Registration Statement on Form S-8 and to file the same, with exhibits thereto and other documents in connection therewith, with the Securities and Exchange Commission, hereby ratifying and confirming all that the said attorney-in-fact, or her substitute or substitutes, may do or cause to be done by virtue hereof.

Pursuant to the requirements of the Securities Act, this registration statement has been signed by the following persons in the capacities and on the dates indicated.

Signature:

Capacity:

Date:

/s/ ANDREY SEMECHKIN
Andrey Semechkin

Chief Executive Officer and Director
(Principal Executive Officer)

January 27, 2010

/s/ RAY WOOD
Ray Wood

Chief Financial Officer
(Principal Financial Officer and Principal Accounting Officer)

January 27, 2010

/s/ KENNETH C. ALDRICH
Kenneth C. Aldrich

Chairman of the Board

January 27, 2010

<div>/s/ JEFFREY D. JANUS</div> <div>Jeffrey D. Janus</div>	Senior Vice President, Operations and Director	January 27, 2010
<div>/s/ PAUL V. MAIER</div> <div>Paul V. Maier</div>	Director	January 27, 2010
<div>/s/ RUSLAN SEMECHKINE</div> <div>Ruslan Semechkine</div>	Director	January 27, 2010
<div>/s/ DONALD A. WRIGHT</div> <div>Donald A. Wright</div>	Director	January 27, 2010

EXHIBIT INDEX

- 3.1 Certificate of Incorporation (incorporated by reference to Exhibit 3.4 of the issuer's Form 10-SB filed on April 4, 2006).
- 3.2 Certificate of Amendment of Certificate of Incorporation (incorporated by reference to Exhibit 3.1 of the issuer's Preliminary Information Statement on Form 14C filed on December 29, 2006).
- 3.3 Amended and Restated Bylaws of the Company (incorporated by reference to Exhibit 3.2 of the issuer's Preliminary Information Statement on Form 14C filed on December 29, 2006).
- 5 Legal Opinion of DLA Piper US LLP
- 23.1 Consent of Counsel (included in Exhibit 5)
- 23.2 Consent of Independent Registered Public Accounting Firm
- 24 Power of Attorney (included in signature pages to this registration statement)



DLA Piper LLP (US)

4365 Executive Drive, Suite 1100
San Diego, California 92121-2133
www.dlapiper.com

January 25, 2010

International Stem Cell Corporation
2595 Jason Court
Oceanside, CA 92056

Ladies and Gentlemen:

We have acted as legal counsel for International Stem Cell Corporation, a Delaware corporation (the “Company”), in connection with a Registration Statement on Form S-8 (the “Registration Statement”) under the Securities Act of 1933, as amended (the “Securities Act”), for the registration of 10,257,593 shares of Common Stock, \$0.001 par value, of the Company (the “Shares”), which may be issued pursuant to certain Stock Option Agreements between the Company and certain of its employees and consultants dated November 4, 2009 and December 10, 2009 (the “Agreements”).

We have examined all instruments, documents and records which we deemed relevant and necessary for the basis of our opinion hereinafter expressed. In such examination, we have assumed the genuineness of all signatures and the authenticity of all documents submitted to us as originals and the conformity to the originals of all documents submitted to us as copies. We express no opinion concerning any law other than the law of the State of California, the corporation laws of the State of Delaware and the federal law of the United States. As to matters of Delaware corporation law, we have based our opinion solely upon our examination of such laws and the rules and regulations of the authorities administering such laws, all as reported in standard, unofficial compilations. We have not obtained opinions of counsel licensed to practice in jurisdictions other than the State of California.

Based on such examination, we are of the opinion that the Shares which may be issued pursuant to the Agreements are duly authorized and, when issued against receipt of the consideration therefor in accordance with the provisions of the Agreements, will be validly issued, fully paid and nonassessable.

We hereby consent to the filing of this opinion as an exhibit to the Registration Statement referred to above and the use of our name wherever it appears in said Registration Statement. In giving this consent, we do not admit that we are within the category of persons whose consent is required under Section 7 of the Securities Act, the rules and regulations of the Securities and Exchange Commission promulgated thereunder or Item 509 of Regulation S-K.

This opinion letter is given to you solely for use in connection with the issuance of the Shares in accordance with the Registration Statement and is not to be relied on for any other purpose. Our opinion is expressly limited to the matters set forth above, and we render no opinion, whether by implication or otherwise, as to any other matters relating to the Company, the Shares or the Registration Statement.

Very truly yours,

/s/ DLA Piper LLP (US)

DLA PIPER LLP (US)



801 South Grand Avenue, Suite 400 • Los Angeles, CA 90017-4646 • Ph. (213) 629-9094 • Fax (213) 996-4242 • www.vasquezcpa.com

Consent of Independent Registered Public Accounting Firm

International Stem Cell Corporation
Oceanside, California

We hereby consent to the incorporation by reference in the Prospectus constituting a part of this Registration Statement of our report dated March 30, 2009 relating to the consolidated financial statements of International Stem Cell Corporation which appears on Page F-2 in the Company's Annual Report on Form 10-K for the year ended December 31, 2008 which is contained in that Prospectus. Our report includes an explanatory paragraph regarding the Company's ability to continue as a going concern.

Vasquez & Company LLP

Los Angeles, California
January 26, 2010

Registered with Public Company Accounting Oversight Board

Member of Private Companies Practice Section & Center for Public Company Audit Firms
