UNITED STATES SECURITIES AND EXCHANGE COMMISSION WASHINGTON, DC 20549

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

Ekso Bionics Holdings, Inc.

(Exact name of registrant as specified in its charter)

Nevada 99-0367049
(State or other jurisdiction of incorporation or organization) (I.R.S. Employer Identification No.)

1414 Harbour Way, Suite 1201 Richmond, California

94804

(Address of Principal Executive Offices)

(Zip Code)

Ekso Bionics 401(k) Plan

Jack Peurach, CEO Ekso Bionics Holdings, Inc. 1414 Harbour Way, Suite 1201 Richmond, CA 94804 (510) 984-1761

(Name, address and telephone number, including area code, of agent for service)

Copy to: Michael J. O'Donnell, Esq. Alfredo B. D. Silva, Esq. Morrison & Foerster, LLP 755 Page Mill Road Palo Alto, CA 94304 (650) 813-5600

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

Large accelerated filer □	Accelerated filer ⊠
Non-accelerated filer □	Smaller reporting company ⊠
	Emerging growth company □

If an emerging growth company, indicate by check mark if the registrant has elected not to use the extended transition period for complying with any new or revised financial accounting standards provided pursuant to Section 7(a)(2)(B) of Securities Act. \Box

CALCULATION OF REGISTRATION FEE

						Proposed				
			Pro	posed		maximum				
		Amount to	max	imum		aggregate	An	nount of		
	Title of securities to be	be	off	ering		offering	reg	istration		
registered(1)		registered	price per share		price			fee		
	Common stock, par value \$0.001 per share:	141,480 (2)	\$	2.28 (3)	\$	322,574.40 (3)	\$	39.10	(3)	

- (1) This Registration Statement covers shares of common stock, \$0.001 par value per share, of Ekso Bionics Holdings, Inc. (the "Registrant") that may be issued to the Ekso Bionics 401(k) Plan (the "401(k) Plan"), or its beneficiaries, as employer matching contributions. In addition, pursuant to Rule 416(c) under the Securities Act of 1933, as amended (the "Securities Act"), this Registration Statement also covers an indeterminate amount of plan interests in the 401(k) Plan.
- (2) This Registration Statement registers 141,480 shares of common stock for issuance to the 401(k) Plan, or its beneficiaries, as employer matching contributions. In accordance with Rule 416 under the Securities Act, this Registration Statement shall be deemed to cover an indeterminate number of additional shares of common stock, as may be issuable pursuant to future stock dividends, stock splits, or similar transactions.
- (3) Estimated solely for the purpose of calculating the registration fee pursuant to Rules 457(c) and (h) under the Securities Act, based on the average of the high (\$2.32) and low (\$2.24) prices of the Registrant's common stock as reported on the Nasdaq Capital Market, which was \$2.28 on March 14, 2019.



EXPLANATORY NOTE

Pursuant to General Instruction E of Form S-8 under the Securities Act, this Registration Statement of the Registrant on Form S-8 is being filed in order to register 141,480 additional shares of the Registrant's common stock which may be offered from time to time under the 401(k) Plan. The contents of the earlier registration statement on Form S-8, filed on January 24, 2018 (File No. 333-222663), to the extent related to or incidental to the 401(k) Plan or the securities offered or sold under the 401(k) Plan, are incorporated by reference into this Registration Statement, and are supplemented by the information set forth below.

PART II

INFORMATION REQUIRED IN THE REGISTRATION STATEMENT

Item 3. Incorporation of Documents by Reference

The Registrant incorporates by reference the following documents that the Registrant has previously filed with the Securities and Exchange Commission (the "SEC"):

- (a) The Registrant's Annual Report on Form 10-K for the fiscal year ended December 31, 2018, filed with the SEC on February 28, 2019;
 - (b) The 401(k) Plan's Annual Report on Form 11-K for the year ended December 31, 2018, filed with the SEC on March 19, 2019;
- (c) The Registrant's Quarterly Reports on Form 10-Q for the fiscal quarters ended March 31, 2018, June 30, 2018 and September 30, 2018, filed with the SEC on May 6, 2018, August 7, 2018 and November 7, 2018 respectively;
- (d) The Registrant's Current Reports on Form 8-K and Form 8-K/A, as applicable, filed with the SEC on January 26, 2018, March 13, 2018 (Item 5.02 only), March 28, 2018, May 15, 2018, June 12, 2018, July 10, 2018, August 13, 2018, August 21, 2018, November 5, 2018, December 17, 2018, January 18, 2019, January 30, 2019 and March 11, 2019; and
- (e) The description of the registrant's common stock contained in the Registrant's Registration Statement on Form 8-A (File No. 001-37854) filed with the SEC on August 8, 2016, pursuant to Section 12(b) of the Securities Exchange Act of 1934, as amended (the "Exchange Act"), including any amendment or report filed for the purpose of updating such description.

All reports and other documents of the Registrant or the 401(k) Plan subsequently filed with the SEC pursuant to Sections 13(a), 13(c), 14 or 15(d) of the Exchange Act after the date of this Registration Statement and prior to the filing of a post-effective amendment that indicates the Registrant has sold all of the securities offered under this Registration Statement or deregisters the distribution of all such securities then remaining unsold shall be deemed to be incorporated by reference in this Registration Statement and to be a part hereof from the date that the Registrant or the 401(k) Plan, as the case may be, files such report or document; *provided*, *however*, that documents or information deemed to have been furnished and not filed in accordance with the rules of the SEC shall not be deemed incorporated by reference into this Registration Statement. 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 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.

- 4.1 Articles of Incorporation of the Registrant (incorporated by reference from Exhibit 3.1 to the Registrant's Annual Report on Form 10-K filed March 19, 2015)
- 4.2 By-Laws of the Registrant (incorporated by reference from Exhibit 3.4 to the Registrant's Current Report on Form 8-K filed on January 23, 2014)
- 4.3 Certificate of Designation of Preferences, Rights and Limitations of Series A Convertible Preferred Stock, filed on December 23, 2015 (incorporated by reference from Exhibit 3.1 to the Registrant's Current Report on Form 8-K filed on December 24, 2015)
- 4.4 Certificate of Amendment to Certificate of Designation of Series A Convertible Preferred Stock, filed on April 4, 2016 (incorporated by reference from Exhibit 3.1 to the Registrant's Current Report on Form 8-K filed on April 7, 2016)
- 4.5 Certificate of Change of Ekso Bionics Holdings, Inc. effective May 4, 2016 (incorporated by reference from Exhibit 3.1 to the Registrant's Current Report on Form 8-K filed on May 5, 2016)
- 4.6 Certificate of Amendment of Certificate of Incorporation of the Registrant (incorporated by reference from Exhibit 3.1 to the Registrant's Current Report on Form 8-K filed on December 27, 2017)
- 4.7 Form of specimen certificate (incorporated by reference from Exhibit 4.4 to the Registrant's Registration Statement on Form S-3 filed on June 23, 2015)
- 4.8 Registration Rights Agreement, dated as of January 15, 2014, by and among the Registrant and the investors named therein (incorporated by reference from Exhibit 10.10 of the Registrant's Current Report on Form 8-K filed on January 23, 2014)
- 4.9 Registration Rights Agreement, dated as of July 19, 2017, by and among the Registrant and the purchasers named therein (incorporated by reference from Exhibit 10.2 of the Registrant's Current Report on Form 8-K filed on July 25, 2017)
- 5.1* Opinion of Snell and Wilmer L.L.P.
- 23.1* Consent of Snell and Wilmer L.L.P. (included in Exhibit 5.1)
- 23.2* Consent of OUM & Co., LLP
- 24.1* Power of Attorney (included in the signature page to this Registration Statement)
- 99.1 The Registrant's 401(k) Plan (incorporated by reference from Exhibit 99.1 of the Registrant's Registration Statement on Form S-8 filed on January 24, 2018)

In lieu of the opinion of counsel or determination letter contemplated by item 601(b)(5) of Regulation S-K, the Registrant hereby undertakes that it will submit or has submitted the 401(k) Plan and any amendments thereto to the Internal Revenue Service ("IRS") in a timely manner and has made or will make all changes required by the IRS in order to qualify the 401(k) Plan.

^{*}Filed herewith.

SIGNATURES

Pursuant to the requirements of the Securities Act of 1933, 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 the City of Richmond, State of California, on March 20, 2019.

EKSO BIONICS HOLDINGS, INC.

By: /s/ John F. Glenn
John F. Glenn
Chief Financial Officer
(principal financial officer)

SIGNATURES AND POWER OF ATTORNEY

KNOW ALL PERSONS BY THESE PRESENTS, that each person whose signature appears below hereby constitutes and appoints Jack Peurach and John F. Glenn, or either one of them, his or her true and lawful attorney-in-fact and agent, with full power of substitution and resubstitution, for such person and in his or her name, place and stead, in any and all capacities, to sign any or all further amendments or supplements (including post-effective amendments filed pursuant to Rule 462(b) of the Securities Act of 1933, as amended) to this registration statement and to file the same, with all exhibits thereto, and other documents in connection therewith, with the SEC, granting unto said attorney-in-fact and agent or either one of them full power and authority to do and perform each and every act and thing requisite and necessary to be done in and about the premises, as fully as to all intents and purposes as he or she might or could do in person, hereby ratifying and confirming all that each of said attorneys-in-fact and agents, or any of them, or his substitutes, may lawfully do or cause to be done by virtue hereof.

Pursuant to the requirements of the Securities Act of 1933, as amended, this Registration Statement has been signed by the following persons in the capacities and on the dates indicated.

Signatures	Title	Date
/s/ Jack Peurach Jack Peurach	Director and Chief Executive Officer (principal executive officer)	March 20, 2019
/s/ John F. Glenn John F. Glenn	Chief Financial Officer (principal financial and accounting officer)	March 20, 2019
/s/ Steven Sherman Steven Sherman	Director and Chairman of the Board	March 20, 2019
/s/ Marilyn Hamilton Marilyn Hamilton	Director	March 20, 2019
/s/ Thomas A. Schreck Thomas A. Schreck	Director	March 20, 2019
/s/ Charlies Li Charles Li	Director	March 20, 2019
/s/ Stanley Stern Stanley Stern	Director	March 20, 2019
/s/ Theodore Wang Theodore Wang	Director	March 20, 2019

Ekso Bionics 401(k) Plan. Pursuant to the requirements of the Securities Act of 1933, the trustees (or other persons who administer the 401(k) Plan) have duly caused this Registration Statement to be signed on their behalf by the undersigned, thereunto duly authorized in the in the City of Richmond, State of California, on March 20, 2019.

EKSO BIONICS 401(k) Plan.

By: /s/ John F. Glenn

John F. Glenn, on behalf of the Ekso Bionics, Inc., Plan Administrator

March 20, 2019

Ekso Bionics Holdings, Inc. 1414 Harbour Way, Suite 1201 Richmond, CA 94804

Re: Registration Statement on Form S-8

Ladies and Gentlemen:

At your request, we have examined the Registration Statement on Form S-8 (the "Registration Statement") filed by Ekso Bionics Holdings, Inc. (the "Company") with the Securities and Exchange Commission (the "Commission") on March 20, 2019, relating to the registration under the Securities Act of 1933, as amended, of an aggregate of 141,480 shares of the Company's Common Stock (the "Shares"), which will be issuable to the Ekso Bionics 401(k) Plan (the "Plan") as employer matching contributions.

As your counsel in connection with the Registration Statement, we have examined the proceedings taken by you and proposed to be taken by you in connection with the adoption of the Plan and the authorization, issuance and sale of the Shares under the Plan, and such documents, matters of fact and questions of law as we have deemed necessary to render this opinion. For the purpose of the opinion rendered below, we have assumed that such proceedings are timely completed in the manner presently proposed by you and that, upon each issuance of Shares, the Company will receive the consideration for such Shares required by the terms of the Plan.

Based upon and subject to the foregoing, we are of the opinion that the Shares, when issued and delivered to the Plan in accordance with the Plan and the Registration Statement, will be legally and validly issued, fully paid and non-assessable.

We consent to the use of this opinion as an exhibit to the Registration Statement and further consent to all references to us in the Registration Statement and in any amendment thereto.

Very truly yours,

/s/ Snell and Wilmer L.L.P.

Snell and Wilmer L.L.P.

CONSENT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

We consent to the incorporation by reference in this Registration Statement on Form S-8, pertaining to the Ekso Bionics 401(k) Plan, of our reports dated February 28, 2019 relating to the consolidated financial statements (which report expresses an unqualified opinion and includes an explanatory paragraph expressing substantial doubt about the Company's ability to continue as a going concern) and the effectiveness of internal control over financial reporting, each appearing in the Annual Report on Form 10-K of Ekso Bionics Holdings, Inc. for the year ended December 31, 2018.

/s/ OUM & CO. LLP

San Francisco, California March 19, 2019