Registration Statement No. 333-

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.)

Ekso Bionics Holdings, Inc.
101 Glacier Point, Suite A
San Rafael, California, 94901
(Address of Principal Executive Offices, including zip code)

Ekso Bionics 401(k) Plan (Full title of the plan)

Scott G. Davis, Chief Executive Officer 101 Glacier Point, Suite A San Rafael, California, 94901 (510) 984-1761

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

Copies to:

Mark B. Baudler Austin D. March Wilson Sonsini Goodrich & Rosati, Professional Corporation 650 Page Mill Road Palo Alto, CA 94304 (650) 493-9300

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 Non-accelerated filer \boxtimes

Accelerated filer Smaller reporting company ⊠ Emerging growth company

| an emerging growth company, indicate by check recounting standards provided pursuant to Section 7 | mark if the registrant has elected not to use the $f(a)(2)(B)$ of Securities Act. | he extended transition period for complying w | rith any new or revised financial |
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EXPLANATORY NOTE

This Registration Statement on Form S-8 (the "Registration Statement") is being filed to register an additional 161,368 shares of common stock of Ekso Bionics Holdings, Inc. (the "Registrant") to be issued pursuant to the Registrant's Ekso Bionics 401(k) Plan (the "401(k) Plan").

This Registration Statement registers additional securities of the same class as other securities for which registration statements filed on Forms S-8 relating to shares issued to the 401(k) Plan are already effective. Pursuant to General Instruction E of Form S-8 under the Securities Act of 1933, as amended (the "Securities Act"), we incorporate by reference into this Registration Statement the contents of (a) the registration statement on Form S-8 (File No. 333-222663), filed on January 24, 2018, to the extent related to or incidental to the 401(k) Plan or the securities offered or sold under the 401(k) Plan, (b) the registration statement on Form S-8 (File No. 333-230404), filed on March 20, 2019 in its entirety, (c) the registration statement on Form S-8 (File No. 333-236412), filed on February 13, 2020 in its entirety, (d) the registration statement on Form S-8 (File No. 333-253035), filed on February 25, 2021 in its entirety, and (e) the registration statement on Form S-8 (File No. 333-263035), filed on February 25, 2022 in its entirety, and in each case excluding the exhibits to such registration statement.

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 "Commission"):

- (a) The Registrant's Annual Report on Form 10-K for the fiscal year ended December 31, 2022, filed with the Commission on March 28, 2023 (the "Annual Report");
- (b) All other reports filed pursuant to Section 13(a) or 15(d) of the Securities Exchange Act of 1934, as amended (the "Exchange Act"), since the end of the fiscal year covered by the Annual Report (other than the portions of these documents not deemed to be filed); and
- (c) 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 Commission on August 8, 2016, pursuant to Section 12(b) of the Exchange Act, including any amendment or report filed for the purpose of updating such description, including Exhibit 4.10 of the Annual Report.

All reports and other documents of the Registrant or the 401(k) Plan subsequently filed with the Commission 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 Commission 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 that 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 8. Exhibits

| Exhibit Number | Description | Form | File Number | Exhibit | Filing Date |
|-------------------|--|------|-------------|---------|-------------------|
| <u>4.1</u> | Articles of Incorporation of the Registrant | 10-K | 001-37854 | 3.1 | March 19, 2015 |
| <u>4.2</u> | By-Laws of the Registrant | 8-K | 001-37854 | 3.1 | April 16, 2021 |
| <u>4.3</u> | Certificate of Change of Ekso Bionics Holdings, Inc. effective May 4, 2016 | 8-K | 001-37854 | 3.1 | May 5, 2016 |
| <u>4.4</u> | Certificate of Amendment of Certificate of Incorporation of the Registrant | 8-K | 001-37854 | 3.1 | December 27, 2017 |
| <u>4.5</u> | Certificate of Amendment of Certificate of Incorporation of the Registrant | 8-K | 001-37854 | 3.1 | March 24, 2020 |
| <u>4.6</u> | Form of specimen certificate | S-3 | 333-205168 | 4.4 | June 23, 2015 |
| <u>5.1*</u> | Opinion of Snell and Wilmer L.L.P. | | | | |
| 23.1* | Consent of WithumSmith+Brown, PC | | | | |
| <u>23.2*</u> | Consent of Snell and Wilmer L.L.P. (included in Exhibit 5.1) | | | | |
| <u>24.1*</u> | Power of Attorney (included in the signature pages hereto) | | | | |
| <u>99.1</u> | <u>The 401(k) Plan</u> | S-8 | 333-222663 | 99.1 | January 24, 2018 |
| <u>107*</u> | Filing Fee Table | | | | |

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 San Rafael, State of California, on March 29, 2023.

EKSO BIONICS HOLDINGS, INC.

By: /s/ Scott G. Davis

Scott G. Davis Chief Executive Officer

SIGNATURES AND POWER OF ATTORNEY

KNOW ALL PERSONS BY THESE PRESENTS, that each person whose signature appears below hereby constitutes and appoints Scott G. Davis and Jerome Wong, 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 Commission, 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/ Scott G. Davis | Chief Executive Officer and Director | March 29, 2023 |
| Scott G. Davis | (principal executive officer) | |
| /s/ Jerome Wong | Chief Financial Officer and Corporate Secretary | March 29, 2023 |
| Jerome Wong | (principal financial and accounting officer) | |
| /s/ Mary Ann Cloyd | Director | March 29, 2023 |
| Mary Ann Cloyd | | |
| /s/ Corinna Lathan | Director | March 29, 2023 |
| Corinna Lathan, Ph.D. | | |
| /s/ Charles Li | Director | March 29, 2023 |
| Charles Li, Ph.D. | | |
| /s/ Steven Sherman | Director | March 29, 2023 |
| Steven Sherman | | |
| /s/ Stanley Stern | Director | March 29, 2023 |
| Stanley Stern | | |
| /s/ Rhonda A. Wallen | Director | March 29, 2023 |
| Rhonda A. Wallen | | |

| 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 San Rafael, State of California, on March 29, 2023. |
| |

| EKSO BIONICS 401(k) Pla |
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| By: | /s/ Jerome Wong | | | |
|-----|--|--|--|--|
| | Jerome Wong, on behalf of the Ekso Bionics, Inc., Plan Administrator | | | |

Calculation of Filing Fee Table FORM S-8 (Form Type)

Ekso Bionics Holdings, Inc. (Exact Name of the Registrant as Specified in its Charter)

| Table 1: Newly Registered Securities | | | | | | | |
|--------------------------------------|--|-------------------------|----------------------|---|--|------------|----------------------------|
| Security Type | Security Class Title | Fee Calculation Rule | Amount Registered | Proposed Maximum Offering Price Per Unit | Maximum aggregate offering price | Fee Rate | Amount of registration fee |
| Equity | Common stock, par value \$0.001 per share: | 457(c) and 457(h) | 161,368 (2) | \$1.47 (3) | \$237,211 (3) | 0.00011020 | \$26.14(3) |
| Total Offering A | mounts | | | | \$237,211 | | \$26.14 |
| Total Fee Offsets | S | | | | | | \$0.00 |
| Net Fee Due | | | | | | | \$26.14 |

- (1) This Registration Statement covers shares of common stock, \$0.001 par value per share, of Ekso Bionics Holdings, Inc., or the Registrant, that may be issued to the Ekso Bionics 401(k) Plan, or 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, or the Securities Act, this Registration Statement also covers an indeterminate amount of plan interests in the 401(k) Plan.
- (2) This Registration Statement registers 161,368 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 in accordance with Rules 457(c) and 457(h) of the Securities Act solely for the purpose of calculating the registration fee on the basis of \$1.47 per share, which is the average of the high and low prices of the Registrant's common stock as reported on the Nasdaq Capital Market on March 24, 2023.

Snell & Wilmer L.L.P.
Hughes Center
3883 Howard Hughes Parkway, Suite 1100
Las Vegas, NV 89169-5958
TELEPHONE: 702.784.5200
FACSIMILE: 702.784.5252

March 29, 2023

Ekso Bionics Holdings, Inc. 101 Glacier Point, Suite A San Rafael, California, 94901

Re: Registration Statement on Form S-8

Ladies and Gentlemen:

We have served as special Nevada counsel to Ekso Bionics Holdings, Inc., a Nevada corporation (the "Company"), in connection with the registration of 161,368 shares (the "Shares") of common stock, \$0.001 par value per share (the "Common Stock"), of the Company issuable as employer matching contributions to the Ekso Bionics 401(k) Plan (the "Plan"), covered by the above-referenced Registration Statement on Form S-8 (the "Registration Statement") filed by the Company with the United States Securities and Exchange Commission (the "Commission") under the Securities Act of 1933, as amended (the "1933 Act"), on or about the date hereof.

This opinion is being furnished in accordance with the requirements of Item 601(b)(5) of Regulation S-K under the Securities Act in connection with the filing of the Registration Statement. All capitalized terms used herein and not otherwise defined shall have the respective meanings given to them in the Registration Statement

In connection with our representation of the Company, and as a basis for the opinion hereinafter set forth, we have relied upon and examined matters of fact, questions of law and documents as we have deemed necessary to render this opinion, including the originals, or copies certified or otherwise identified to our satisfaction, of the following documents (hereinafter collectively referred to as the "Documents"):

- 1. The Registration Statement and exhibits hereto;
- 2. The Articles of Incorporation of the Company filed with the Secretary of State of the State of Nevada, as amended though the date hereof (the "Charter"), certified as of the date hereof by an officer of the Company;
 - 3. The Bylaws of the Company, certified as of the date hereof by an officer of the Company;
 - 4. Certificate of Existence with Status in Good Standing, certified by the Secretary of State of the State of Nevada, dated as of a recent date;
- 5. Resolutions adopted by the Board of Directors of the Company relating to the authorization of the issuance of the Shares (the "Resolutions"), certified as of the date hereof by an officer of the Company;
- 6. A specimen of the current form of stock certificate representing shares of the Company's Common Stock, certified as of the date hereof by an officer of the Company;
 - $7. \ The \ Plan, certified \ as \ of the \ date \ hereof \ by \ an \ officer \ of the \ Company;$
 - 8. A certificate executed by an officer of the Company, dated as of the date hereof, as to certain factual matters; and
- 9. Such other documents and matters as we have deemed necessary or appropriate to express the opinion set forth below, subject to the assumptions, limitations and qualifications stated herein.

In expressing the opinion set forth below, we have assumed the following:

A. Each individual executing any of the Documents, whether on behalf of such individual or any other person, is legally competent to do so.

B. All Documents submitted to us as originals are authentic. The form and content of all Documents submitted to us as unexecuted drafts do not differ in any respect relevant to this opinion from the form and content of such Documents as executed and delivered. All Documents submitted to us as certified or photostatic copies conform to the original documents. All signatures on all such Documents are genuine. All public records reviewed or relied upon by us or on our behalf are true and complete. All representations, warranties, statements and information contained in the Documents are true and complete. There has been no oral or written modification of or amendment to any of the Documents, and there has been no waiver of any provision of any of the Documents, by action or omission of the parties or otherwise. For the purpose of the opinion rendered below, we have assumed that, upon each issuance of Shares, the Company will receive or has received the consideration for such Shares required by the Resolutions.

Based upon the foregoing, and subject to the assumptions, limitations and qualifications stated herein, it is our opinion that the issuance of the Shares has been duly authorized and, when issued and delivered by the Company pursuant to the Resolutions and otherwise in accordance with the Registration Statement, and upon payment for and delivery of the Shares subject to issuance and sale by the Company, the Shares will be validly issued, fully paid and nonassessable.

We render this opinion only with respect to the general corporate law of the State of Nevada as set forth in Chapter 78 of the Nevada Revised Statutes. We neither express nor imply any obligation with respect to any other laws or the laws of any other jurisdiction or of the United States. For purposes of this opinion, we assume that the Shares will be issued in compliance with all applicable state securities or blue sky laws.

The opinion expressed herein is limited to the matters specifically set forth herein and no other opinion shall be inferred beyond the matters expressly stated. We assume no obligation to supplement this opinion if any applicable law changes after the date hereof or if we become aware of any fact that might change the opinion expressed herein after the date hereof. Without limiting the generality of the foregoing, we neither express nor imply any opinion regarding the contents of the Registration Statement, other than as expressly stated herein with respect to the Shares.

We hereby consent to the filing of this opinion as an exhibit to the Registration Statement and to the use of the name of our firm therein. In giving this consent, we do not admit that we are within the category of persons whose consent is required by Section 7 of the 1933 Act or the rules and regulations of the Commission promulgated thereunder.

Very truly yours,

/s/ Snell & Wilmer L.L.P.

CONSENT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

We consent to the incorporation by reference, in the Registration Statement on Form S-8 pertaining to the Ekso Bionics Holdings, Inc. Amended and Restated 2014 Equity Incentive Plan, as amended, of our report dated March 28, 2023 relating to the consolidated financial statements of Ekso Bionics Holdings, Inc., included in its Annual Report on Form 10-K for the year ended December 31, 2022.

/s/ WithumSmith+Brown, PC

San Francisco, California March 29, 2023