UNITED STATES SECURITIES AND EXCHANGE COMMISSION

Washington, D.C. 20549

FORM S-8 REGISTRATION STATEMENT

UNDER
THE SECURITIES ACT OF 1933

CalciMedica, Inc.

(Exact name of registrant as specified in its charter)

		-						
	Delaware (State or other jurisdiction of incorporation or organization)		45-2120079 (I.R.S. Employer Identification No.)					
505 C	oast Boulevard South, Suite 30 La Jolla, California	7	92037					
(Ad	dress of Principal Executive Offices)		(Zip Code)					
	,	2023 Equity Incentive Plan 2023 Employee Stock Purchase Plan (Full titles of the plans)						
		A. Rachel Leheny, Ph.D.						
		Chief Executive Officer						
	5	05 Coast Boulevard South, Suite 307						
		La Jolla, California 92037						
	(Name, address, including z	(858) 952-5500 ip code, and telephone number, including area code, o	f agent for service)					
		Copies to:						
	Thomas A. Coll		John M. Dunn					
Carlos Ramirez			General Counsel					
	Cooley LLP		ast Boulevard South, Suite 307					
	10265 Science Center Drive San Diego, California 92121 (858) 550-6000		a Jolla, California 92037 (858) 952-5500					
	ny. See the definitions of "large a	ccelerated filer, an accelerated filer, a non-acceccelerated filer," "accelerated filer," "smaller		an				
Large accelerated filer			Accelerated Filer					
Non-accelerated filer	\boxtimes		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 the Securities Act. □

REGISTRATION OF ADDITIONAL SHARES PURSUANT TO GENERAL INSTRUCTION E

This Registration Statement on Form S-8 is being filed by CalciMedica, Inc. (the "*Registrant*") with the Securities and Exchange Commission (the "*SEC*") for the purpose of increasing the number of securities of the same class as other securities for which a Registration Statement on Form S-8 relating to the same employee benefit plans is effective. The Registrant previously registered its shares of common stock, par value \$0.0001 per share, for issuance under the Registrant's 2023 Equity Incentive Plan and the Registrant's 2023 Employee Stock Purchase Plan under the Registrant's Registration Statement on Form S-8 (the "*Prior Registration Statement*") filed with the SEC on May 12, 2023 (File No. 333-271898). Pursuant to General Instruction E to Form S-8, this Registration Statement hereby incorporates by reference the contents of the Prior Registration Statement.

ITEM 8. EXHIBITS.

Exhibit Number	Description				
4.1	Amended and Restated Certificate of Incorporation (incorporated by reference to Exhibit 3.1 to the Registrant's Current Report on Form 8-K, filed with the SEC on March 22, 2023).				
4.2	Certificate of Amendment to Amended and Restated Certificate of Incorporation of the Registrant (incorporated by reference to Exhibit 3.2 to the Registrant's Current Report on Form 8-K, filed with the SEC on March 22, 2023).				
4.3	Restated Bylaws (incorporated by reference to Exhibit 3.2 to the Registrant's Quarterly Report on Form 10-Q, filed with the SEC on November 12, 2020).				
5.1	Opinion of Cooley LLP.				
23.1	Consent of Independent Registered Public Accounting Firm.				
23.2	Consent of Cooley LLP. Reference is made to Exhibit 5.1.				
24.1	Power of Attorney. Reference is made to the signature page hereto.				
99.1	CalciMedica, Inc. 2023 Equity Incentive Plan (incorporated by reference to Exhibit 10.6 to the Registrant's Current Report on Form 8-K, filed with the SEC on March 22, 2023).				
99.2	Form of Option Grant Notice and Option Agreement under CalciMedica, Inc. 2023 Equity Incentive Plan (incorporated by reference to Exhibit 10.7 to the Registrant's Current Report on Form 8-K, filed with the SEC on March 22, 2023).				
99.3	Forms of Restricted Stock Unit Grant Notice and Unit Award Agreement under CalciMedica, Inc. 2023 Equity Incentive Plan (incorporated by reference to Exhibit 10.8 to the Registrant's Current Report on Form 8-K, filed with the SEC on March 22, 2023).				
99.4	CalciMedica, Inc. 2023 Employee Stock Purchase Plan (incorporated by reference to Exhibit 10.9 to the Registrant's Quarterly Report on Form 10-Q, filed with the SEC on May 12, 2023).				
107	<u>Filing Fee Table.</u>				

SIGNATURES

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 the La Jolla, State of California, on March 28, 2024.

CALCIMEDICA, INC.

By: /s/ A. Rachel Leheny, Ph.D.

A. Rachel Leheny, Ph.D.
Chief Executive Officer

POWER OF ATTORNEY

KNOW ALL PERSONS BY THESE PRESENTS, that each person whose signature appears below constitutes and appoints A. Rachel Leheny, Ph.D. and Daniel Geffken, and each of them, as true and lawful attorneys-in-fact and agents, with full powers of substitution and resubstitution, for them and in their name, place and stead, in any and all capacities, to sign any and all amendments (including post-effective amendments) to this registration statement, and to file the same, with all exhibits thereto, and other documents in connection therewith, with the Securities and Exchange Commission, and generally to do all such things in their names and behalf in their capacities as officers and directors to enable CalciMedica, Inc. to comply with the provisions of the Securities Act of 1933, as amended, and all requirements of the Securities and Exchange Commission, granting unto said attorneys-in-fact and agents, and each of them, full power and authority to do and perform each and every act and thing requisite and necessary to be done in connection therewith, as fully to all intents and purposes as he might or could do in person, ratifying and confirming all that said attorneys-in-fact and agents, or any of them, or their or his substitutes or substitute, 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 on Form S-8 has been signed by the following persons in the capacities and on the dates indicated.

Signature	Title	Date	
/S/ A. RACHEL LEHENY, Ph.D. A. Rachel Leheny, Ph.D.	Chief Executive Officer and Director (Principal Executive Officer)	March 28, 2024	
/S/ DANIEL GEFFKEN Daniel Geffken	Interim Chief Financial Officer (Principal Financial and Accounting Officer)	March 28, 2024	
/S/ ROBERT N. WILSON Robert N. Wilson	Chairman	March 28, 2024	
/S/ ERIC BJERKHOLT Eric Bjerkholt	Director	March 28, 2024	
/S/ FREDERIC GUERARD, PHARM.D. Frederic Guerard, Pharm.D.	Director	March 28, 2024	
/S/ FRED MIDDLETON Fred Middleton	Director	March 28, 2024	
/S/ ERIC W. ROBERTS Eric W. Roberts	Director	March 28, 2024	
/S/ ALLAN SHAW Allan Shaw	Director	March 28, 2024	



Carlos Ramirez T: +1 858 550 6157 cramirez@cooley.com

March 28, 2024

CalciMedica, Inc. 505 Coast Boulevard South, Suite 307 La Jolla, CA 92037

Ladies and Gentlemen:

We have acted as counsel to CalciMedica, Inc., a Delaware corporation (the "*Company*"), in connection with the filing by the Company of a registration statement on Form S-8 (the "*Registration Statement*") with the Securities and Exchange Commission (the "*Commission*"), covering the offering of up to 345,270 shares of the Company's Common Stock, \$0.0001 par value per share (the "*Shares*"), consisting of (i) 287,725 shares issuable pursuant to the Company's 2023 Equity Incentive Plan (the "*2023 Plan*"), and (ii) 57,545 shares issuable pursuant to the Company's 2023 Employee Stock Purchase Plan (together with the 2023 Plan, the "*Plans*").

In connection with this opinion, we have examined and relied upon (i) the Registration Statement and related prospectuses, (ii) the Company's certificate of incorporation and bylaws, each as currently in effect, (iii) the Plans, and (iv) such other records, documents, certificates, memoranda and instruments as in our judgment are necessary or appropriate to enable us to render the opinion expressed below. We have assumed the genuineness of all signatures; the authenticity of all documents submitted to us as originals; the conformity to originals of all documents submitted to us as copies; the accuracy, completeness and authenticity of certificates of public officials; and the due authorization, execution and delivery of all documents by all persons other than by the Company where authorization, execution and delivery are prerequisites to the effectiveness thereof. As to certain factual matters, we have relied upon a certificate of an officer of the Company and have not independently verified such matters.

Our opinion is expressed only with respect to the General Corporation Law of the State of Delaware. We express no opinion to the extent that any other laws are applicable to the subject matter hereof and express no opinion and provide no assurance as to compliance with any federal or state securities law, rule or regulation.

On the basis of the foregoing, and in reliance thereon, we are of the opinion that the Shares, when sold and issued in accordance with the Plans, the Registration Statement and related prospectuses, will be validly issued, fully paid and nonassessable (except as to Shares issued pursuant to deferred payment arrangements, which will be fully paid and nonassessable when such deferred payments are made in full).

This opinion is limited to the matters expressly set forth in this letter, and no opinion should be implied, or may be inferred, beyond the matters expressly stated. This opinion speaks only as to law and facts in effect or existing as of the date hereof and we have no obligation or responsibility to update or supplement this opinion to reflect any facts or circumstances that may hereafter come to our attention or any changes in law that may hereafter occur.

We consent to the filing of this opinion 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 of 1933, as amended, or the rules and regulations of the Commission thereunder

Cooley LLP 10265 Science Center Drive San Diego, CA 92121 t: (858) 550-6000 f: (858) 550-6420 cooley.com



March 28, 2024 Page Two

Sincerely,

Cooley LLP

By: /s/ Carlos A. Ramirez
Carlos A. Ramirez

Cooley LLP 10265 Science Center Drive San Diego, CA 92121 t: (858) 550-6000 f: (858) 550-6420 cooley.com

Consent of Independent Registered Public Accounting Firm

We consent to the incorporation by reference in the Registration Statement (Form S-8) pertaining to the 2023 Equity Incentive Plan and 2023 Employee Stock Purchase Plan of CalciMedica, Inc. of our report dated March 28, 2024, with respect to the consolidated financial statements of CalciMedica, Inc., included in its Annual Report (Form 10-K) for the year ended December 31, 2023, filed with the Securities and Exchange Commission.

/s/ Ernst & Young LLP

San Diego, California March 28, 2024

Calculation of Filing Fee Table

Form S-8 (Form Type)

CalciMedica, Inc.

(Exact Name of Registrant as Specified in its Charter)

Table 1: Newly Registered Securities

Security Type	Security Class Title	Fee Calculation Rule	Amount Registered ⁽¹⁾	Proposed Maximum Offering Price Per Unit ⁽²⁾		Fee Rate	Amount of Registration Fee
Equity	2023 Equity Incentive Plan						
	Common Stock, \$0.0001 par value per share	Other(2)	287,725 (3)	\$3.70	\$1,064,582.50	.00014760	\$157.13
Equity	2023 Employee Stock Purchase Plan						
	Common Stock, \$0.0001 par value per share	Other(2)	57,545 (4)	\$3.70	\$212,916.50	.00014760	\$31.43
Total Offering Amounts					\$1,277,499.00		_
Total Fees Previously Paid							
Total Fee Offsets							
Net Fee Due							\$188.56

- (1) Pursuant to Rule 416(a) under the Securities Act of 1933, as amended (the "Securities Act"), this Registration Statement on Form S-8 shall also cover any additional shares of common stock, par value \$0.0001 per share ("Common Stock"), of CalciMedica, Inc. (the "Registrant") that become issuable under the Registrant's 2023 Equity Incentive Plan (the "2023 Plan") and the Registrant's 2023 Employee Stock Purchase Plan (the "2023 ESPP") by reason of any stock dividend, stock split, recapitalization or other similar transaction.
- (2) Estimated solely for the purpose of calculating the amount of the registration fee pursuant to Rule 457(c) and 457(h) of the Securities Act using the average of the high and low prices of the Common Stock as reported on the Nasdaq Capital Market on March 21, 2024.
- (3) Represents shares of Common Stock that were automatically added to the shares authorized for issuance under the 2023 Plan on January 1, 2024 pursuant to an "evergreen" provision contained in the 2023 Plan. Pursuant to such provision, on January 1st of each year through (and including) January 1, 2033, the number of shares authorized for issuance under the 2023 Plan will be automatically increased by the lesser of: (a) 5% of the total number of shares of capital stock of the Registrant outstanding on December 31 of the preceding calendar year; or (b) such lesser number of shares of Common Stock as the Registrant's board of directors (the "*Board*") may designate prior to the applicable January 1st.
- (4) Represents shares of Common Stock that were automatically added to the shares authorized for issuance under the 2023 ESPP on January 1, 2024 pursuant to an "evergreen" provision contained in the 2023 ESPP. Pursuant to such provision, on January 1st of each year through (and including) January 1, 2033, the number of shares authorized for issuance under the 2023 ESPP will be automatically increased by a number equal to the lesser of: (a) 1% of the total number of shares of capital stock outstanding on December 31 of the preceding calendar year; (b) 195,000 shares; or (c) such lesser number of shares of Common Stock as the Board may designate prior to the applicable January 1st.