

INITIAL STATEMENT OF BENEFICIAL OWNERSHIP OF SECURITIES

OMB APPROVAL	
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Filed pursuant to Section 16(a) of the Securities Exchange Act of 1934 or Section 30(h) of the Investment Company Act of 1940

1. Name and Address of Reporting Person* <u>White Nicole S</u> (Last) (First) (Middle) C/O ASSEMBLY BIOSCIENCES, INC. 331 OYSTER POINT BLVD., FOURTH FLOOR (Street) SOUTH SAN FRANCISCO CA 94080 (City) (State) (Zip)	2. Date of Event Requiring Statement (Month/Day/Year) 09/13/2023	3. Issuer Name and Ticker or Trading Symbol <u>ASSEMBLY BIOSCIENCES, INC. [ASMB]</u>	
		4. Relationship of Reporting Person(s) to Issuer (Check all applicable) Director 10% Owner <input checked="" type="checkbox"/> Officer (give title below) Other (specify below) Chief Manufacturing Officer	5. If Amendment, Date of Original Filed (Month/Day/Year) 6. Individual or Joint/Group Filing (Check Applicable Line) <input checked="" type="checkbox"/> Form filed by One Reporting Person <input type="checkbox"/> Form filed by More than One Reporting Person

Table I - Non-Derivative Securities Beneficially Owned

1. Title of Security (Instr. 4)	2. Amount of Securities Beneficially Owned (Instr. 4)	3. Ownership Form: Direct (D) or Indirect (I) (Instr. 5)	4. Nature of Indirect Beneficial Ownership (Instr. 5)
Common Stock	86,142 ⁽¹⁾	D	

Table II - Derivative Securities Beneficially Owned (e.g., puts, calls, warrants, options, convertible securities)

1. Title of Derivative Security (Instr. 4)	2. Date Exercisable and Expiration Date (Month/Day/Year)		3. Title and Amount of Securities Underlying Derivative Security (Instr. 4)		4. Conversion or Exercise Price of Derivative Security	5. Ownership Form: Direct (D) or Indirect (I) (Instr. 5)	6. Nature of Indirect Beneficial Ownership (Instr. 5)
	Date Exercisable	Expiration Date	Title	Amount or Number of Shares			
Stock Option (right to buy)	(2)	11/16/2030	Common Stock	50,000	5.62	D	
Stock Option (right to buy)	(3)	03/29/2032	Common Stock	100,000	2.3	D	
Stock Option (right to buy)	(4)	08/01/2032	Common Stock	200,000	2.01	D	
Stock Option (right to buy)	(5)	03/29/2033	Common Stock	140,000	0.89	D	
Performance-based Restricted Stock Units	(6)	03/29/2027	Common Stock	25,000	0.00	D	

Explanation of Responses:

- Holdings include grants of restricted stock units (RSUs) vesting, in each case assuming continuous service on each vesting date, as follows: (a) 2,500 RSUs vesting in equal installments on November 16, 2023 and November 16, 2024; (b) 18,750 RSUs vesting in equal installments on March 29, 2024, March 29, 2025 and March 29, 2026; (c) 5,469 RSUs vesting on May 22, 2024; and (d) 25,000 RSUs vesting on August 1, 2024.
- Grant of stock options. Options to purchase 34,375 shares of common stock have vested, and, assuming continuous service on each vesting date, the remaining stock options vest in 15 approximately equal monthly installments, with the options becoming fully vested on November 16, 2024.
- Grant of stock options. Options to purchase 35,416 shares of common stock have vested, and, assuming continuous service on each vesting date, the remaining stock options vest in 31 approximately equal monthly installments, with the options becoming fully vested on March 29, 2026.
- Grant of stock options. Options to purchase 54,166 shares of common stock have vested, and, assuming continuous service on each vesting date, the remaining stock options vest in 35 approximately equal monthly installments, with the options becoming fully vested on August 1, 2026.
- Grant of stock options. The stock options vest over four years, assuming continuous service on each vesting date, as follows: 25% vest on the first anniversary of the date of grant, March 29, 2024; and the remaining 75% vest in 36 approximately equal monthly installments, with the options becoming fully vested on March 29, 2027.
- Each performance-based RSU represents a contingent right to receive one share of the Issuer's common stock. The shares are earned if either of two trading price metrics are met (each a "Stock Metric") either on or before the second or on or before the fourth anniversary of the grant date, as applicable. If a Stock Metric is met on or before the first anniversary of the grant date, then 50% of the RSUs vest on the first anniversary of the grant date and the remainder will vest on the second anniversary of the grant date. If a Stock Metric is achieved after the first anniversary of the grant date and on or before the fourth anniversary of the grant date, then 50% of the RSUs vest on the date that the Stock Metric is achieved and the remaining 50% of the RSUs vest on the first anniversary of the initial vesting date. Special vesting provisions apply in the case of a change in control transaction.

Remarks:

Exhibit 24.1 - Power of Attorney

/s/ John O. Gunderson, as 09/18/2023

Attorney-in-Fact

** Signature of Reporting
Person

Date

Reminder: Report on a separate line for each class of securities beneficially owned directly or indirectly.

* If the form is filed by more than one reporting person, see Instruction 5 (b)(v).

** Intentional misstatements or omissions of facts constitute Federal Criminal Violations See 18 U.S.C. 1001 and 15 U.S.C. 78ff(a).

Note: File three copies of this Form, one of which must be manually signed. If space is insufficient, see Instruction 6 for procedure.

Persons who respond to the collection of information contained in this form are not required to respond unless the form displays a currently valid OMB Number.

LIMITED POWER OF ATTORNEY

The undersigned hereby constitutes and appoints each of Jason A. Okazaki, John O. Gunderson and Jeanette M. Bjorkquist, signing singly, and with full power of substitution, the undersigned's true and lawful attorney-in-fact to:

(1) execute for and on behalf of the undersigned, in the undersigned's capacity as officer and/or director of Assembly Biosciences, Inc. (the "Company"), from time to time the following U.S. Securities and Exchange Commission ("SEC") forms: (i) Form ID, including any attached documents, to effect the assignment of codes to the undersigned to be used in the transmission of information to the SEC using the EDGAR System; (ii) Form 3, Initial Statement of Beneficial Ownership of Securities, including any attached documents; (iii) Form 4, Statement of Changes in Beneficial Ownership of Securities, including any attached documents; (iv) Form 5, Annual Statement of Beneficial Ownership of Securities in accordance with Section 16(a) of the Securities Exchange Act of 1934, as amended, and the rules thereunder, including any attached documents; (v) Schedule 13D; and (vi) amendments of each thereof, in accordance with the Securities Exchange Act of 1934, as amended, and the rules thereunder, including any attached documents;

(2) do and perform any and all acts for and on behalf of the undersigned which may be necessary or desirable to complete and execute any such Form 3, 4 or 5, Schedule 13D or any amendment(s) thereto, and timely file such form(s) with the SEC and any securities exchange, national association or similar authority; and

(3) take any other action of any type whatsoever in connection with the foregoing which, in the opinion of such attorney-in-fact, may be of benefit to, in the best interest of, or legally required by, the undersigned, it being understood that the documents executed by such attorney-in-fact on behalf of the undersigned pursuant to this Power of Attorney shall be in such form and shall contain such terms and conditions as such attorney-in-fact may approve in such attorney-in-fact's discretion.

The undersigned hereby grants to each such attorney-in-fact, acting singly, full power and authority to do and perform any and every act and thing whatsoever requisite, necessary or proper to be done in the exercise of any of the rights and powers herein granted, as fully to all intents and purposes as the undersigned might or could do if personally present, with full power of substitution or revocation, hereby ratifying and confirming all that such attorney-in-fact, or such attorney-in-fact's substitute or substitutes, shall lawfully do or cause to be done by virtue of this power of attorney and the rights and powers herein granted. The undersigned acknowledges that the foregoing attorneys-in-fact, in serving in such capacity at the request of the undersigned, are not assuming, nor is the Company assuming, any of the undersigned's responsibilities to comply with Section 16 or Regulation 13D-G of the Securities Exchange Act of 1934, as amended. The undersigned hereby agrees to indemnify the attorneys-in-fact and the Company from and against any demand, damage, loss, cost or expense arising from any false or misleading information provided by the undersigned to the attorneys-in-fact.

This Power of Attorney shall remain in full force and effect until the undersigned is no longer required to file such forms with respect to the undersigned's holdings of and transactions in securities issued by the Company, unless earlier revoked by the undersigned in a signed writing delivered to the foregoing attorneys-in-fact. This Power of Attorney supersedes any prior power of attorney in connection with the undersigned's capacity as an officer and/or director of the Company. This Power of Attorney shall expire as to any individual attorney-in-fact if such attorney-in-fact ceases to be an executive officer of, or legal counsel to, the Company.

IN WITNESS WHEREOF, the undersigned has caused this Power of Attorney to be executed as of September 06, 2023.

/s/ Nicole S. White
Nicole S. White