UNITED STATES SECURITIES AND EXCHANGE COMMISSION

Washington, D.C. 20549

FORM S-8

REGISTRATION STATEMENT UNDER THE SECURITIES ACT OF 1933

GREENWICH LIFESCIENCES, INC.

(Exact name of registrant as specified in its charter)

Delaware

(State or other jurisdiction of incorporation or organization)

20-5473709

(I.R.S. Employer Identification No.)

3992 Bluebonnet Dr., Building 14
Stafford, Texas
(Address of principal executive offices)

77477 (Zip Code)

Greenwich LifeSciences, Inc. 2019 Equity Incentive Plan (Full title of the plan)

Snehal Patel
Chief Executive Officer
Greenwich LifeSciences, Inc.
3992 Bluebonnet Dr, Building 14
Stafford, TX 77477
(832) 819-3232

(Name and address of agent for service)

(832) 819-3232

(Telephone number, including area code, of agent for service)

With a copy to:
Jeffrey Fessler, Esq.
Sheppard, Mullin, Richter & Hampton LLP
30 Rockefeller Plaza
New York, NY 10112-0015
Phone: (212) 653-8700
Fax: (212) 653-8701

Indicate b	y check marl	k whether the	e registrant i	is a large	accelerated	filer,	an accelerated	filer,	a non-accelerated t	filer, a s	smaller reportii	ng company	or an	emerging g	growth
company	See definition	ns of "large a	ccelerated fil	ler " "acc	elerated filer	" "sm	naller reporting	comp	any " and "emergin	orowi	th company" in	Rule 12h-2	of the	Exchange A	Act

Large accelerated filer \square	Accelerated filer □ Smaller reporting company ⊠	Non-accelerated filer ⊠ Emerging growth company ⊠									
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 ecounting standards provided pursuant to Section $7(a)(2)(B)$ of the Securities Act.											

PART I

INFORMATION REQUIRED IN THE SECTION 10(a) PROSPECTUS

EXPLANATORY NOTE

This Registration Statement is being filed for the purpose of registering an additional 2,500,000 shares of Common Stock that were reserved for issuance under the 2019 Equity Incentive Plan. The Registrant previously filed with the Securities and Exchange Commission (the "Commission") registration statements on Form S-8 on July 5, 2022 (Registration No. 333-266017), registering shares of Common Stock issuable under the 2019 Equity Incentive Plan (a "Prior Registration Statement"). This Registration Statement relates to securities of the same class as those to which the Prior Registration Statement relate and is submitted in accordance with General Instruction E of Form S-8 regarding Registration of Additional Securities. Pursuant to General Instruction E of Form S-8, the contents of the Prior Registration Statement is incorporated herein by reference and made part of this Registration Statement, except for Items 3 and 8, which are being updated by this Registration Statement.

ITEM 2. REGISTRANT INFORMATION AND EMPLOYEE PLAN ANNUAL INFORMATION.

We will provide to each Recipient a written statement advising of the availability of documents incorporated by reference in Item 3 of Part II of this Registration Statement (which documents are incorporated by reference in this Section 10(a) prospectus) and of documents required to be delivered pursuant to Rule 428(b) under the Securities Act without charge and upon written or oral request by contacting:

Snehal Patel Chief Executive Officer Greenwich LifeSciences, Inc. 3992 Bluebonnet Dr, Building 14 Stafford, TX 77477 (832) 819-3232

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PART II

INFORMATION NOT REQUIRED IN THE PROSPECTUS

ITEM 3. INCORPORATION OF DOCUMENTS BY REFERENCE.

The following documents filed by the Company with the Securities and Exchange Commission ("SEC") pursuant to the Securities Act and the Securities Exchange Act of 1934, as amended (the "Exchange Act"), are incorporated herein by reference:

- The Company's Annual Report on Form 10-K for the fiscal year ended December 31, 2023, filed with the SEC on April 15, 2024, which contains audited financial statements for the Company's latest fiscal year, for which such statements have been filed.
- The Company's Quarterly Report on Form 10-Q for the three months ended March 31, 2024, filed with the SEC on May 20, 2024.
- The Company's Quarterly Report on Form 10-Q for the three months ended June 30, 2024, filed with the SEC on August 14, 2024.
- The Company's Quarterly Report on Form 10-Q for the three months ended September 30, 2024, filed with the SEC on November 14, 2024.
- The Company's Current Reports on Form 8-K filed with the SEC on February 14, 2024, February 20, 2024, June 17, 2024 and December 19, 2024.
- The description of the Company's common stock contained in its Registration Statement on Form 8-A (File No. 001-39555) filed with the SEC on September 23, 2020, under Section 12(b) of the Securities Exchange Act of 1934, as amended (the "Exchange Act"), including any amendments or reports filed for the purpose of updating such description.

All other reports and documents filed by the Company pursuant to Section 13(a), 13(c), 14 or 15(d) of the Exchange Act (other than Current Reports furnished under Item 2.02 or Item 7.01 of Form 8-K and exhibits furnished on such form that relate to such items) subsequent to the date of this Registration Statement and prior to the filing of a post-effective amendment to this Registration Statement that indicates that all securities offered hereby have been sold or that deregisters all securities then remaining unsold, shall be deemed to be incorporated by reference into this Registration Statement and to be a part hereof from the date of filing such reports and documents. 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 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 constitute a part of this Registration Statement, except as so modified or superseded.

ITEM 4. DESCRIPTION OF SECURITIES.

Not applicable.

ITEM 5. INTERESTS OF NAMED EXPERTS AND COUNSEL.

Not applicable.

ITEM 6. INDEMNIFICATION OF DIRECTORS AND OFFICERS.

Section 102 of the Delaware General Corporation Law (the "DGCL") permits a corporation to eliminate the personal liability of directors of a corporation to the corporation or its stockholders for monetary damages for a breach of fiduciary duty as a director, except where the director breached his duty of loyalty, failed to act in good faith, engaged in intentional misconduct or knowingly violated a law, authorized the payment of a dividend or approved a stock repurchase in violation of Delaware corporate law or obtained an improper personal benefit. Our Certificate of Incorporation, as amended ("Certificate of Incorporation"), provides that no director of our Company shall be personally liable to it or its stockholders for monetary damages for any breach of fiduciary duty as a director, notwithstanding any provision of law imposing such liability, except to the extent that the DGCL prohibits the elimination or limitation of liability of directors for breaches of fiduciary duty.

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Section 145 of the DGCL provides that a corporation has the power to indemnify a director, officer, employee, or agent of the corporation, or a person serving at the request of the corporation for another corporation, partnership, joint venture, trust or other enterprise in related capacities against expenses (including attorneys' fees), judgments, fines and amounts paid in settlement actually and reasonably incurred by the person in connection with an action, suit or proceeding to which he was or is a party or is threatened to be made a party to any threatened, ending or completed action, suit or proceeding by reason of such position, if such person acted in good faith and in a manner he reasonably believed to be in or not opposed to the best interests of the corporation, and, in any criminal action or proceeding, had no reasonable cause to believe his conduct was unlawful, except that, in the case of actions brought by or in the right of the corporation, no indemnification shall be made with respect to any claim, issue or matter as to which such person shall have been adjudged to be liable to the corporation unless and only to the extent that the Court of Chancery or other adjudicating court determines that, despite the adjudication of liability but in view of all of the circumstances of the case, such person is fairly and reasonably entitled to indemnity for such expenses which the Court of Chancery or such other court shall deem proper.

Our amended and restated certificate of incorporation, as amended, and bylaws will provide indemnification for our directors and officers to the fullest extent permitted by the DGCL. We will indemnify each person who was or is a party or threatened to be made a party to any threatened, pending action by or in the right of us by reason of the fact that he or she is or was, or has agreed to become, a director or officer, or is or was serving, or has agreed to serve, at our request as a director, officer, partner, employee or trustee of, or in a similar capacity with, another corporation, partnership, joint venture, trust or other enterprise (all such persons being referred to as an "Indemnitee"), or by reason of any action alleged to have been taken or omitted in such capacity, against all expenses (including attorneys' fees), judgments, fines and amounts paid in settlement actually and reasonably incurred in connection with such action, suit or proceeding and any appeal therefrom, if such Indemnitee acted in good faith and in a manner he or she reasonably believed to be in, or not opposed to, our best interests, and, with respect to any criminal action or proceeding, he or she had no reasonable cause to believe his or her conduct was unlawful. Our amended and restated certificate of incorporation, as amended, and bylaws provide that we will indemnify any Indemnitee who was or is a party to an action or suit by or in the right of us to procure a judgment in our favor by reason of the fact that the Indemnitee is or was, or has agreed to become, a director or officer, partner, employee or trustee of, or in a similar capacity with, another corporation, partnership, joint venture,

trust or other enterprise, or by reason of any action alleged to have been taken or omitted in such capacity, against all expenses (including attorneys' fees) and, to the extent permitted by law, amounts paid in settlement actually and reasonably incurred in connection with such action, suit or proceeding, and any appeal therefrom, if the Indemnitee acted in good faith and in a manner he or she reasonably believed to be in, or not opposed to, our best interests, except that no indemnification shall be made with respect to any claim, issue or matter as to which such person shall have been adjudged to be liable to us, unless a court determines that, despite such adjudication but in view of all of the circumstances, he or she is entitled to indemnification of such expenses. Notwithstanding the foregoing, to the extent that any Indemnitee has been successful, on the merits or otherwise, he or she will be indemnified by us against all expenses (including attorneys' fees) actually and reasonably incurred in connection therewith. Expenses must be advanced to an Indemnitee under certain circumstances.

We have entered into separate indemnification agreements with each of our directors and executive officers. Each indemnification agreement provides, among other things, for indemnification to the fullest extent permitted by law and our amended and restated certificate of incorporation, as amended, and bylaws against any and all expenses, judgments, fines, penalties and amounts paid in settlement of any claim. The indemnification agreements will provide for the advancement or payment of all expenses to the indemnitee and for the reimbursement to us if it is found that such indemnitee is not entitled to such indemnification under applicable law and our amended and restated certificate of incorporation and amended and restated bylaws.

We maintain a general liability insurance policy that covers certain liabilities of directors and officers of our corporation arising out of claims based on acts or omissions in their capacities as directors or officers.

Insofar as indemnification for liabilities arising under the Securities Act of 1933, as amended (the "Securities Act") may be permitted to our directors, officers and controlling persons pursuant to the foregoing provisions, or otherwise, we have 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.

ITEM 7. EXEMPTION FROM REGISTRATION CLAIMED.

Not applicable.

ITEM 8. EXHIBITS.

See the attached Exhibit Index on the page immediately following the signature pages hereto, which is incorporated herein by reference.

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ITEM 9. UNDERTAKINGS.

A. 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. Notwithstanding the foregoing, any increase or decrease in volume of securities offered (if the total dollar value of securities offered would not exceed that which was registered) and any deviation from the low or high end of the estimated maximum offering range may be reflected in the form of prospectus filed with the Commission pursuant to Rule 424(b) if, in the aggregate, the changes in volume and price represent no more than a 20% change in the maximum aggregate offering price set forth in the "Calculation of Registration Fee" table in the effective 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 information required to be included in a post-effective amendment by those paragraphs is contained in reports filed with or furnished to the Commission 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 herein, 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.
- B. 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 herein, and the offering of such securities at that time shall be deemed to be the initial bona fide offering thereof.
- C. 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 person in connection with the securities 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.

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SIGNATURES

GREENWICH LIFESCIENCES, INC.

By: /s/ Snehal Patel

Snehal Patel

Chief Executive Officer and Director (Principal Executive Officer)

POWER OF ATTORNEY

KNOW ALL MEN BY THESE PRESENTS, that each person whose signature appears below constitutes and appoints Snehal Patel as his or her true and lawful attorney-infact and agent, with full power of substitution and resubstitution, for him or her and in their name, place and stead, in any and all capacities, to sign any and all amendments (including post-effective amendments), and to file the same, with all exhibits thereto and other documents in connection therewith, with the Securities and Exchange Commission, granting unto said attorney-in-fact and agent, 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, hereby ratifying and confirming all that said attorney-in-fact and agent, or his substitute or substitutes, may lawfully do or cause to be done by virtue hereof.

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

Signature	Title	Date		
/s/ Snehal Patel Snehal Patel	Chief Executive Officer and Director (Principal Executive Officer and Principal Accounting and Financial Officer)	December 20, 2024		
/s/ F. Joseph Daugherty F. Joseph Daugherty	Chief Medical Officer and Director	December 20, 2024		
/s/ David McWilliams David McWilliams	Director	December 20, 2024		
/s/ Eric Rothe Eric Rothe	Director	December 20, 2024		
/s/ Kenneth Hallock Kenneth Hallock	Director	December 20, 2024		
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EXHIBIT INDEX

Exhibit							
Number	Description						
4.1	Specimen Stock Certificate evidencing the shares of common stock (Incorporated by reference to Exhibit 4.1 to the Company's Registration Statement on Form S-						
	1 filed on June 23, 2020)						
5.1	Opinion of Sheppard, Mullin, Richter & Hampton LLP						
10.1	Greenwich LifeSciences, Inc. 2019 Equity Incentive Plan (incorporated by reference to Exhibit 10.1 to Form S-1 filed on May 29, 2020)						
23.1	Consent of RBSM LLP						
23.2	Consent of Sheppard, Mullin, Richter & Hampton LLP (included in Exhibit 5.1)						
24.1	Power of Attorney (included on signature page)						
107	Filing Fee Tables						
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SheppardMullin

Sheppard, Mullin, Richter & Hampton LLP 30 Rockefeller Plaza New York, New York 10112-0015 212.653.8700 main 212.653.8701 fax www.sheppardmullin.com

December 20, 2024

VIA ELECTRONIC MAIL

Greenwich LifeSciences, Inc. 3992 Bluebonnet Dr, Building 14 Stafford, TX 77477

Re: Registration Statement on Form S-8

Ladies and Gentlemen:

You have requested our opinion with respect to certain matters in connection with the filing by Greenwich LifeSciences, Inc., a Delaware corporation (the "Company"), of a Registration Statement on Form S-8 (the "Registration Statement") under the Securities Act of 1933, as amended (the "Securities Act"), with the Securities and Exchange Commission, covering 2,500,000 shares (the "Shares") of common stock, par value \$0.001 per share (the "Common Stock"), reserved for future issuance under the Greenwich LifeSciences, Inc. 2019 Equity Incentive Plan (the "Plan").

This Opinion is being furnished in accordance with the requirements of Item 8 of Form S-8 and Item 601(b)(5)(i) of Regulation S-K.

In connection with this opinion, we have reviewed and relied upon the Registration Statement, the Company's Certificate of Incorporation as amended and in effect on the date hereof (the "Certificate of Incorporation"), the Company's Bylaws as in effect on the date hereof (the "Bylaws" and together with the Certificate of Incorporation, the "Charter Documents"), the proceedings taken by the Company with respect to the authorization and adoption of the Plan, resolutions adopted by the board of directors of the Company, and such other documents, records, certificates, memoranda and other instruments as we deem necessary as a basis for this opinion. With respect to the foregoing documents, we have assumed the genuineness of all signatures, the authenticity of all documents submitted to us as originals and the conformity to original of all documents submitted to us as certified or reproduced copies. We have also assumed that the Shares will be uncertificated in accordance with Section 158 of the Delaware General Corporation Law, and the transfer agent therefor will register the purchaser thereof as the registered owner of any uncertificated Shares on its stock transfer books and records. We have further assumed that (a) shares of the Common Stock currently reserved for issuance under the Plan will remain available for the issuance of the Shares, and (b) neither the Company's Charter Documents nor any of the proceedings relating to either the Plan or any of the award agreements relating to the Shares will be rescinded, amended or otherwise modified prior to the issuance of the Shares. We have also obtained from public officials and officers of the Company certificates or comparable documents as to certain factual matters and, insofar as this opinion is based on matters of fact, we have relied on such certificates and comparable documents without independent investigation. We have made such other investigations as we have deemed relevant and necessary in connection with the opinions hereinafter set forth.

On the basis of the foregoing, and in reliance thereon, we are of the opinion that the Shares, when issued and sold in the manner referred to in the Plan and against proper payment and consideration thereof and pursuant to the agreements that accompany the Plan, will be legally and validly issued, fully paid and nonassessable.

We consent to the filing of this opinion letter as Exhibit 5.1 to the Registration Statement. In giving such consent, we do not thereby admit that we are included in the category of persons whose consent is required under Section 7 of the Securities Act or the rules and regulations of the Securities and Exchange Commission promulgated thereunder.

We express no opinion as to matters governed by any laws other than the Delaware General Corporation Law and reported decisions of the Delaware courts interpreting such law.

This opinion letter is rendered as of the date first written above, and we disclaim any obligation to advise you of facts, circumstances, events or developments which hereafter may be brought to our attention and which may alter, affect or modify the opinion expressed herein. 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, the Plan, the award agreements related to the Shares or the Registration Statement.

Respectfully Submitted,

/s/ Sheppard, Mullin, Richter & Hampton LLP SHEPPARD, MULLIN, RICHTER & HAMPTON LLP



Consent of Independent Registered Public Accounting Firm

We consent to the incorporation by reference in this Registration Statement on Form S-8 of our report dated April 15, 2024, which includes an explanatory paragraph regarding the substantial doubt about the Company's ability to continue as a going concern, relating to the audited financial statements of Greenwich LifeSciences, Inc. (the "Company") appearing in the Annual Report on Form 10-K of the Company for the year ended December 31, 2023, and to the reference to us under the heading "Experts", in the Prospectus, which is a part of the Registration statement.

ROSM LLP

RBSM LLP Houston, TX December 20, 2024

Calculation of Filing Fee Tables

FORM S-8

(Form Type)

GREENWICH LIFESCIENCES, INC.

(Exact Name of Registrant as Specified in its Charter)

Table 1: Newly Registered Securities

	Security Type	Security Class Title	Fee Amount Calculation Registered Rule (1)		Proposed Maximum Offering Price Per Share		Maximum Aggregate Offering Price	Fee Rate	Amount of Registration Fee	
		Common Stock, par value \$0.001								
Fees to Be Paid	Equity	per share	457(h)	2,500,000	\$	12.73(2)	\$ 31,825,000	.00015310	\$	4,873
Fees Previously Paid										
Total Offering Amounts										
Total Fees Previously Paid										-
Total Fee Offsets (3)										
Net Fee Due										4,873

(1) Pursuant to Rule 416 under the Securities Act of 1933, as amended (the "Securities Act"), this Registration Statement shall also cover any additional shares of common stock, par value \$0.001 per share ("Common Stock"), of Greenwich LifeSciences, Inc.(the "Registrant") that become issuable under the Registrant's 2019 Equity Incentive Plan (the "Plan"), by reason of any stock dividend, stock split, recapitalization or other similar transaction that increases the number of the outstanding shares of the Registrant's common stock. In addition, pursuant to Rule 416(c) under the Securities Act, this Registration Statement shall also cover an indeterminate amount of interests to be offered or sold pursuant to the employee benefit plan described herein.

(2) Estimated solely for purposes of calculating the registration fee in accordance with Rule 457(h) of the Securities Act by averaging the high and low sales prices of the Registrant's Common Stock reported on The Nasdaq Capital Market on December 18, 2024.

(3) The Registrant does not have any fee offsets.